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AMERICAN NURSERYMAN

The Nurseryman's Forte: To Make America More Beautiful and Fruitful

OCTOBER 1, 1936



Elsholtzia Stauntoni

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Patented Roses
Cost Finding
Better Pentstemons
Fertilizing Shade Trees
Pacific Coast Convention

AMERICAN NURSERYMAN

Chief Exponent of the Nursery Trade

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of nursery associations.

PUBLICITY.

Those who advocate greater publicity directed to the public regarding nursery products find little argument these days. Everyone views it as a necessity to increasing sales. If plants could command half as much newspaper space as automobiles or baseball, the horticultural industry would boom overnight.

Nursery products are receiving more publicity than they have had in the past. A number of metropolitan newspapers carry at least a weekly garden page, usually under the direction of a person well informed enough to put really valuable material in the space. Such garden pages are to be commended, since they are far more valuable to the trade than the columns of curious facts and the space-fillers that have passed for garden departments in the past.

Radio garden talks are becoming another publicity feature of trade value. These have been of varying quality, likewise. So it is worth while to note so valuable a series as that put on by the Radio Garden Club over station WOR every Tuesday and Friday afternoon, through the coöperation of the agricultural extension service of Rutgers University and garden organizations of New York and New Jersey. Some of the talks given on this broadcast, and further details regarding this, are given on another page of this issue. Authentic information of this type will cultivate public interest in gardening and provide useful education.

Such publicity is particularly of moment at a time like this. Com-

The Mirror of the Trade

menting on an index of the cost of living, an economist recently remarked that the low point of three years ago occurred when everybody, laborer and millionaire alike, was economizing. Now the income of every class is rising. Expenditures are made, not for the bare necessities of food, lodging and clothing, but for those articles popularly considered not so much luxuries as necessities if one is "to keep up with the Joneses"—such as automobiles, washing machines, electrical appliances, etc. If the planting of one's home grounds were essential to keeping up with the Joneses, nurserymen would have better business. Publicity, accurate and helpful, is the sole means of putting our product in that class.

URGES A. A. N. TO LEAD WAY.

The confidential news-letter which has been circulated in mimeographed form only to members of the American Association of Nurserymen graduated last week to a four-page size, reproduced by planograph process. Two pages are filled with helpful notes about association work, government activities, etc., and some of these items will be worth real dollars to the recipients.

The fourth page is given over to the reproduction of newspaper headlines indicating current business improvement in other fields. These illustrate the text of the opening letter, by President Clarence O. Siebenthaler, who urges members to lead the way to larger sales in the nursery industry, advice that can well come from the man engaged in leading the association to larger activity and effectiveness. He says:

How is the nursery business? Is it moving along with other industries, or is it just waiting for people to come along and take its stock away? What are we doing to get our share of this business? Is the landscape nurseryman watching the building permits, securing the name of owner, architect and contractor, and then trying to get an appropriation for planting before all the money is spent for other accessories? Has the wholesale nurseryman ever made suggestions as to how the retailer could increase his business?

The evidence of recovery which we see on all hands should be enough to start us thinking. We are going to have to do a better selling job than ever before.

Distressingly low prices still prevail in some sections. This is especially true in bidding on public contracts. Prices have risen in all other lines, and the buyer ex-

pects to pay more for nursery stock, too. If we do not place a fair and proper value on our products, the public cannot be expected to do so.

With the conditions existing today, it is the stock which is now present in our nurseries that should pay for the losses of the last several years. An increase of twenty-five to forty per cent in our present prices would seem to be justly warranted, and instead of dissipating our present supply it should be made, as far as possible, to pay us what it cost, instead of throwing it away and then growing more to worry about. There is sometimes more profit to be made in losing an order than just to be able to say that you are the successful bidder.

It is about time that the nurserymen of the country snap out of the throes of the depression, go after more business, throw away their red ink and put some oil on the cash register. It is up to the members of the American Association to lead the way.

ELSHOLTZIA STAUNTONI.

A companion plant to *Vitex macrophylla* is the mintshrub, *Elsholtzia Stauntoni*, which follows the former in flowering, usually beginning about the middle of September and continuing for a fortnight to a month, depending upon the weather. Cool, moist conditions enhance the beauty of the blooms and lengthen their period of attractiveness. A representative specimen is illustrated on the front cover.

The *elsholtzia* belongs to the mint family, which fact is readily recognizable in both the flowers and foliage. The tubular, lipped flowers are pink, or pinkish lavender, sometimes becoming almost rose, and are borne in terminal spikes characteristic of the labiate.

This low-growing shrub is herbaceous in appearance, and sometimes the shoots are killed back to the ground, but the subsequent growth from the roots blooms the same season. Some killing back of the tips of the branches occurs occasionally in the vicinity of Chicago, but plants have weathered minimums of between 20 and 30 degrees below zero during the past few winters without killing to the ground and have bloomed profusely every year.

The mintshrub can be propagated readily from softwood cuttings taken either from outdoor plants in summer or from forced plants in the greenhouse in winter. A sunny location is preferable for the best flower production.

AMERICAN NURSERYMAN

[Registered U. S. Patent Office]

The Chief Exponent of the American Nursery Trade

*The Nurseryman's Forte:
To Make America More Beautiful and Fruitful*

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No. 7

Patented Roses

Misunderstanding of Plant Patents Corrected and Their Advantages Explained before California Convention by Clarence G. Perkins, of Jackson & Perkins Co., San Jose

So much misunderstanding seems to exist with relation to plant patents that I believe it wise to set down the facts about them. The particular misapprehension that it seems important to correct relates to what a patent for a rose or a new gadget really is, both being essentially the same.

Article I, section 8, of the federal Constitution authorizes patents thus: "The Congress shall have power to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."

On this primary authorization rests the great body of patent laws and regulations. As the law stands today, there is a commissioner of patents, who is under the Secretary of Commerce. He is in control of the patent office and its appointed officials and employees. He is permitted to charge certain definite fees for patents, and these fees are expected to maintain the patent office. He supervises not only these employees, but the attorneys who apply for and forward patents through his department. American patent laws are quite parallel to the patent laws of other countries, save that, so far, only the United States has permitted the patenting of plants, although we have been advised by our attorneys at Washington that two roses recently were patented in Germany under the general patent laws, while England and France are seriously considering the matter. There is no doubt in my mind that other countries will soon grant plant patents, and we shall then be in a position

to reciprocate patents as other commodities.

The modifications to the general patent laws which are broadly but inaccurately characterized by the name of the plant patent act became effective May 23, 1930, since which time 220 patents for plants have been issued, to September 1, 1936.

Right here it should be insistently brought to everybody's attention that there is no separate plant patent act. Plants are patentable under the provisions of the general patent acts above discussed, and the same section in the law which permits the patenting of a new shoe-jack or a new locomotive or a new radio applies to plants. Again I urge that this statement be memorized by the critics of the plant practice, because it is vitally important. It seems to be expected, I gather, that every plant patented is more or less guaranteed by the government to be a good, useful and desirable plant. It is not expected, however, that of the 2,029,282 patents issued, every item is desirable and guaranteed by the government.

Let us now consider the law under which a new rose or a new pumpkin or a new watchcase may be patented. We start with the provision of the Constitution above quoted; then comes section 4886, reading thus: "Any person who has invented or discovered any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvements thereto, or who has invented or discovered and asexually reproduced any distinct and new variety of plant, other than a tuber-propagated plant, not known or used by others in this coun-

try, before his invention or discovery thereof, and not patented or described in any printed publication in this or any foreign country, before his invention and discovery thereof, or more than two years prior to his application, and not in public use or on sale in this country for more than two years prior to his application, unless the same is proved to have been abandoned, may, upon payment of the fees required by law, and other due proceeding had, obtain a patent therefor."

Section 4886, after prescribing a description of "the invention or discovery," mentions the fact that the patent is "a grant to the patentee, his heirs or assigns, for the term of seventeen years, of the exclusive right to make, use, and vend the invention and discovery (including in the case of a plant patent the exclusive right to asexually reproduce the plant) throughout the United States and territories thereof."

I have heard people insist that because a plant is patented, the government has assured it to be a good plant. This is not the fact. The patentee has been given the patent because he believed it to be "distinct and new" and has provided under oath, to support his belief, a description and a picture to be considered by the examiners, including Department of Agriculture experts, who pass upon all patents.

Is a rose good because it is patented? Broadly speaking, I will say, yes. In the first place, a patent means an expenditure of \$250 to \$300, and no originator or distributor will invest that amount in a rose unless he feels reasonably sure that the rose has merits, appeals to the public and will enjoy a sufficient distribution to repay the

investment and bring a profit. But there is no rose, nor will there ever be any, that is universally good. There have been up to date over 16,000 roses, and not one has ever been found satisfactory in all climates and soils and under all conditions. Roses are essentially regional and easily affected by climatic and atmospheric conditions and by the chemical composition of the soil often unnoticed by rose growers. One soil will produce a tremendous growth, but few and poor blooms, while another soil will give only a moderate growth, but excellent blooms.

At a rose show in Lyons, France, when Talisman was first introduced in Europe, two growers, one located north of the city and the other south, perhaps two miles apart, exhibited Talisman. One lot was excellent, of well formed blooms, richly colored; the other was washy and misformed, but had splendid foliage. Those two exhibits looked like different varieties. Dr. J. H. Nicolas, head of our research department, there at the time, investigated the conditions and found that the soil where the richly colored Talisman grew was lighter and well supplied with iron, but the plants were smaller. The other nurseryman rejected Talisman as "no good." A rose that is "no good" for one grower may be very good for another, and no patent can change that.

We have investigated practically all the rose novelty producing centers and have come to the conclusion that most new roses are good and worthy of dissemination at their point of origin. The problem is how far will they travel from that point.

Most European originators are small operators, catering to a restricted clientele, whose fads and fancies are to be reckoned with. Not being protected as we are by a patent, they are not concerned with the success of their roses in America or other far-away points because the variety is soon out of their hands and becomes public property. Even the great Pernet-Ducher and houses like McGredy and Dickson have put out many varieties which are duds in our point of view, but which are still varieties appreciated in their own country and in general demand there. Besides climatic and soil conditions, we have also to deal with styles and tastes of their clientele, which may be different from ours. If these facts were better understood we should not hear derogatory and often silly remarks such as, "Why in heck

did he send out that worthless rose?" Incidentally, the proportion of American roses reaching popularity in Europe is less than that of European roses finding favor with us. Our type of roses simply does not suit the European public. Then there is a class of roses grown for exhibition purposes which we do not fully understand because our rose shows are not on the same plan as European shows; ours are for garden roses; theirs are for the most magnificent blooms magnificently grown, and hybridizers are catering to that popular sport. Generally an exhibition rose is a poor doer, and a great amount of bloom or activity can seldom be expected from that type. Whenever we see that word "exhibition" in a new foreign description, it acts as a red flag, and we distrust the variety, well knowing that it will seldom meet the requirements of the American public. About two-thirds of American patented roses are varieties strictly bred for florists' use and to be grown in greenhouses; few of those roses are satisfactory outdoors. But as soon as a new cut flower variety becomes known and widely used by retail florists, the public demands plants for the garden, the performance of which is often disappointing and leads to criticism of the nurseryman and the patent. For this reason we carry on a two-year test throughout the United States to determine whether or not a rose is worthy of dissemination.

Summarizing the above, a patented rose is good somewhere, but not necessarily everywhere.

What has the patent done for the public? The patent has to a great extent overcome the difficulty so far as the public is concerned and renders its selection much easier and safer. While the patent is not a guarantee that the rose will be outstanding in all locations, it is a guarantee that the rose has been tried and found good in key points of large population under varied conditions and will probably give satisfaction. The patent tag attached to each plant further guarantees that the plant is genuine.

What has the patent done for the nurseryman? While the patent has restricted novelties and eliminated doubtful ones, it also gives protection to the nurseryman. He knows the general conditions of the bulk of his trade and can select roses that are to be generally satisfactory to his territory. He is protected against price-cutting and unfair practice because

patented roses are sold everywhere and by everybody at the same price. Patented roses do not necessarily have to be grown by the patentee; each nurseryman can grow his own roses, if he wishes, by obtaining from the patentee a license to grow a stipulated number of plants and he will be supplied with that number of patent tags. Another benefit of the patent is the development of national advertising, which creates a demand and helps the retail nurseryman to sell the roses. No one could afford to advertise if he did not have a long-time control of the variety, as the patent gives him. The time is past when the world will beat a path to the best mousetrap maker's door. If we want to sell novelties, we must bring them before the public in a forceful manner through advertising, but no one can advertise a product of which he has no control. The patent gives that control.

I believe it is well here to warn nurserymen that a new rose should not be judged in the nursery row. These plants are maidens, growing out of one eye. This first growth is generally distorted and abnormal because of the tremendous push of an overpowerful root system; the blooms are not at their normal condition, often coming in clusters or "candelabras" (and sometimes they are too good to be true), while the flowering habit of the variety on old plants is solitary. The late autumn blooming has often become more normal as the plant is built. But final judgment should wait until the second year or the third year, which means the second year after the plants have been transplanted, as it is such plants that the amateur will have and on them he will form his opinion of the variety, which should not be final until the second year after transplanting. It is our experience that the quality of a rose improves each year for several years as plants become established.

It is generally accepted that about thirty per cent of rose varieties are better in the nursery row than they will ever be afterward, some thirty per cent are much inferior in the maiden stage to what they will be on older plants and only forty per cent are in the field as they will be later on in the amateur's garden. We believe that the plant patent law, though in its infancy now, will tend to stabilize prices and will prove of great value to the nursery industry.

Cost Finding for Nurserymen

Procedure of Determining Costs in the Nursery and Their Uses When Established, Outlined before California Convention by R. L. Adams, of University of California

Determining the cost of producing fruit trees when this is but one phase of a nursery business involves many costs that are of an intermingled nature; that is, costs that are expended for more than a single product. This condition necessitates estimating the proportion of a given total cost which is to be assigned to a single product when two or more are involved—a somewhat complicated procedure. Hence, if a number of products are involved, it is not nearly so possible to arrive at a cost determination that is unquestioned, because several products may utilize the same item—labor, equipment, office, etc. Yet it is possible to arrive at a cost, even though this cost may be approximate rather than absolute, which may be turned to practical use by the nurseryman to whose business the data apply. The job is, however, simple when the study is directed to a farm or agricultural business producing but a single commodity. Fortunately, there are nurserymen who concentrate upon the production of but a single kind of product; viz., one of fruit trees, or vines, or rosebushes, or ornamentals. For these men accurate costs can usually be ascertained. But costs for nurseries producing a variety of commodities involve the problem of intermingled costs, and hence the accuracy of the findings will be proportionate to the care with which the books are kept, the details set forth in these records, the degree to which this type of costs can be broken down, and the accuracy of estimates when these must be used in place of more definite data. This would certainly be difficult if a study of the cost of producing ornamentals were to be undertaken.

We have been requested, moreover, to determine the average cost on nurseries to be selected for all deciduous trees lumped together—almonds, apricots, peaches, pears, plums, etc. The result of such a study would be an intermingled cost for a group of products. I am told that the various operations required to produce different kinds of trees such as those just listed do not involve suffi-

ciently important differences to cause the findings to be much out of agreement. Some seeds or buds may cost more than others, some kinds may require staking, but the idea as expressed to me is that these differences in actual practice "iron out."

Method of Procedure.

The question "How can costs be determined?" may be answered by indicating the method of procedure, based on many past studies, which the college would pursue.

As a preliminary, any worker assigned to this task would first acquaint himself with the extent and localization of the nursery business within whatever area were selected for study—California, for instance—involving the producing of trees, vines, or ornamentals for which cost data were to be assembled and analyzed—in this case, deciduous fruit trees, including almonds. Next a list of nurserymen whose cooperation is needed would be selected. This list would include enough names to provide a fair cross section of the industry, broken down so that the problems associated with differences in size of business, differences in location and differences in technique would be brought clearly into view.

In California, selection of such a list would be drawn from approximately 140 nurserymen, producing in 1936 about 4,500,000 deciduous fruit trees, of which about 3,000,000 will be available for sale. These nurseries are located from Sebastopol in the north, Newcastle to the east, to Beaumont (Riverside county) in the south. In size the smallest producer is credited with an annual output of less than 1,500 deciduous fruit trees, the largest with nearly a million. In between are all kinds and sizes of businesses. In dollar volume, this phase of the nursery business is estimated to be between \$500,000 and \$700,000. Next, the investigator must decide upon the method to be employed in determining costs.

There are two ways for making cost determination. The first consists in determining the costs of the business

as a whole and then allocating to each product its proportionate share. The other method consists in listing the various operations involved in producing a given commodity, determining the amount of labor, materials, use of equipment, office expense, management, sales expense, etc., required in such production, with rates previously determined applied to each of these various items. Both methods are feasible. The first method, that of determining costs of the business as a whole, has its application to the diversified business and the advantage that tests may be made, after the costs are determined, to determine the effect upon profits of increasing or reducing any department; viz., ornamentals, fruit trees, vines, etc. This method permits answering the question: "What will be the probable effect upon my profits if I double, or halve, my output of fruit trees, or vines, or ornamentals?" This is the sort of information that I should desire if I were in the nursery business. The second and simpler method can be used for nurseries when a single kind of output constitutes the sole business.

With his list of nurserymen finally prepared and the basis of determining costs decided, then, the time comes for actual field work. Calls will be made upon those selected to furnish the necessary data, and I repeat that the successful culminating of a study such as this depends upon full and hearty cooperation. Since the nurserymen themselves are the only sources of data, the value of the conclusions will be in direct proportion to the completeness and accuracy of the contributed information. However, assuming that the right men have been selected and are ready to "go to bat," then an outline is prepared, showing the various operations required to produce nursery stock. This is the "calendar of operations" or "work schedule" of the farm manager. It takes into account such items as soil preparation—plowing, reploting, disking, harrowing, leveling and listing; planting cuttings; cultivating, hoeing and weeding; grafting and

budding; pruning and suckering; shading; irrigating; manuring and fertilizing; spraying and dusting; killing gophers and other damaging rodents; digging, baling, bundling or packaging; delivering to shipping point.

Operating and Overhead.

This list forms the basis for starting an inquiry into costs. Costs are of two kinds, (a) operating and (b) overhead. Both are involved in the total cost. The operating costs are those related to kinds and amounts of production and their various requirements. They are represented by what you must spend for labor, feed for work animals, fuel and oils for tractors and trucks, parts and repairs for implements and machinery, purchase of seeds, cuttings, or buds; purchase or pumping of irrigation water, purchase of pest control materials, purchase of materials for office records, salaries of bookkeepers, and other items for which money must be expended.

Overhead costs are those which affect the maintenance of the capital structure of the business and continue regardless of what is provided as long as the operator remains in business. These costs consist of charges to cover depreciation of equipment—work animals, tractors, trucks, implements, machines, buildings, pumping plants, shelters, etc. (and sometimes of land, when owned and subject to measurable depreciation); mortality (in the case of work animals); management, charge for use of land (either interest or rent), taxes and insurance. Inclusion of these costs is designed to indicate what is needed to maintain capital intact. These charges continue irrespective of changes in kinds and amounts of production. You will note that I have not included expenses for advertising, salesmen, collection of accounts, etc. This phase is not a part of the cost of production, but rather the cost of disposing of the product. You will likewise note that no charge is made for interest upon either investments (that is, capital in the business) nor for use of operating capital. Interest is best handled as a profit rather than as a cost.

Relationship.

At this time your attention should be called to the part that overhead plays in connection with costs. This total is fairly definite and continues

year after year irrespective of the amount of commodities produced or the volume of sales. This relationship has a direct bearing upon any future reorganizing of the business in light of cost findings in that if the volume is reduced, the cost per unit for overhead mounts proportionately. For example, if a given business produces 100,000 units of goods at total operating costs of \$10,000 and a total overhead of another \$10,000, the cost per unit is 20 cents. If the cost seems high in relation to the price received from the sale of the units and the output is cut to 50,000 units, the operating costs can be held, theoretically at least, to the same 10 cents, but the overhead, assuming no possible reduction, must be borne by 50,000 units, instead of 100,000, and the overhead cost per unit becomes 20 cents, with a resulting total cost per unit of 30 cents. This is an important aspect and deserves very careful consideration when applying cost findings to possible reorganizing of a nursery or any other business.

When possible, the investigator will report his findings in terms of quantities. Thus his completed study will try to show the total number of man-hours required in producing some unit, say 1,000 trees; hours of use of work animals, tractors and other farming equipment, etc. By so doing a record is established that can be used in the future, as long as the technical processes remain unchanged, by substituting the then-existing rates for those determined at the time of the study.

In determining rates for use in connection with each item comprising costs, the investigator must tap several resources. When available as book records his job is fairly simple, but many costs are not likely to be set forth in record form. Recourse must then be had to the best judgment of those whose experience has been sufficient to result in competent opinions. These people will include not only managers and foremen, but also workmen whose employment has been largely devoted to the nursery business.

Use of Findings.

We now turn to the question: "What use can be made of the findings?" In other words, once we have determined what is the cost of producing a fruit tree, or a vine, or a

rosebush, what are we going to do with the figures? Two possible uses suggest themselves. The first is an intelligent reorganizing of a man's individual business. If he finds that his costs are markedly higher than are those of others in the business, emphatically he must plan steps to reduce costs. This may mean more efficient use of labor, a larger volume of output, a reduction in numbers of trees, vines, or shrubs for which he cannot find a market, use of less expensive land, more efficient use of equipment. This phase has to do with the internal reorganization. And there seem to be some grounds for attention along this line.

Bear in mind, however, that cost finding is but a means to an end, not the end of itself. Yet a study such as this is of first importance in helping nurserymen to understand the function of costs and the nature of the help that they can give to the nurseryman seeking a better knowledge of his business. Properly analyzed, the data can be used to assist a nurseryman in judging whether or not he is making money at the price at which he can sell. If his selling price is fairly stable, then high costs can wipe out any possibility of profit, while conversely, low costs are conducive to profit making. It is but one business tool available to the nurseryman, but unless it is utilized, the operator deprives himself of a helpful means to assist himself. And if not utilized, the record keeping can easily become an expense without an offsetting compensation. "Suppose," you may ask, "that the costs do reach a high figure and no economies can be practiced, then what?" The answer is obvious; you must either continue to operate with high costs if you can, or you must change to another environment, or else you must study what of the usual wide assortment produced by a nurseryman is responsible for the high costs, eliminating these in favor of concentrating upon those products which can be grown economically.

As a further thought, bear in mind that costs, both absolute and relative, are not the final determinant of what to produce and what not to produce. The costs must be evaluated in terms of selling price. Thus a nurseryman with a receptive market taking a quality product at relatively high prices can continue with relatively high

(Concluded on page 10.)

The Better Pentstemons

Progress Made in Sifting the Good Kinds for the Garden from 200 or More Species Botanically Described—By C. W. Wood

It is not necessary to go backward more than ten years to find out how far we have come along the pentstemon pathway. A decade ago the number of species available in America could, no doubt, have been counted on one hand, while today some lists contain five times that many. And we have a long way to go yet to sift out all the good kinds from the 200 or more species that have been described. It is not mere numbers of plants, of course, that we need, but we should have all the really good ones, be they pentstemon or otherwise, that we can get, not only for the good of gardens, but for the plant grower's business as well. It will pay you, therefore, to give serious thought to the possibilities offered by this attractive genus.

Pentstemons are, with perhaps one exception, natives of America, a number of them being found in Mexico. These Mexicans are too delicate for our northern winters and are, consequently, of no use to the hardy plantsman, unless he grows annuals as well. Aside from these, however, there is plenty of hardy material to keep one busy for years. All species that I have grown are easily propagated from seeds, preferably sown in an outdoor frame in autumn. If a greenhouse is available, they may be started into growth in late winter, usually with the assurance of fairly good germination. The mat makers, like *P. Crandallii*, may be endlessly multiplied by division, and particularly good color forms of the variable kinds may be propagated from cuttings, rubbing off the pieces with a heel and rooting in the usual way.

Generally speaking, pentstemons require a deep, well drained soil and full sun, but they are quite adaptable and will withstand not a little variation of growing conditions. Deviations from the requirements will be noted under the separate entries which follow. One should commence the cultivation of these beardtongues with the knowledge that many of them are short-lived, and no amount of coaxing seems to make them otherwise. Farrer puts it felicitously when he points out that their flowers are "brilliant in proportion as the life of the individual plant is brief, pentstemon usually having but a bush

constitution, preferring a crowded hour of glory rather than a longer existence of mere usefulness." In the following account I have included only the better kinds which have been grown in my garden, leaving out the poor relations and those of undetermined merit.

P. acuminatus, a widespread plant of the western states, seldom appears in lists, although it is worthy of cultivation, especially in its lilac form. It grows about fifteen inches high and bears numerous, inch-long flowers, which are broad at the throat and have spreading lobes, varying somewhat in color from lilac and violet to a combination of these colors with purple. In the plains states it appears to favor an open, sunny situation and does well in gardens under the same conditions. *P. nitidus*, which I have had on two or three occasions, seems not to be different enough from the foregoing to attain garden recognition, its principal difference being in shape of leaf, a factor that is of little consequence to the gardener so long as the difference is not pronounced.

In *P. alpinus* we approach a group of beardtongues that are badly confused, some making our present plant a variety of *P. glaber*, which in turn is also known as *speciosus* and infrequently as *Gordonii*. Let the botanists do as they please, it is probably best from the gardener's point of view to keep *P. alpinus* and *P. glaber* distinct. The first of these grows eight to ten inches high, the stem leaves being narrow-lanceolate and the cluster being short and few-flowered. As I have had it, the flowers are quite uniformly a clear blue, usually with a light to whitish throat. It is a beautiful species, though short-lived, generally monocarpic under conditions in the east.

Pictures of *P. angustifolius* in the literature, particularly the densely flowered, slender-spiked form, show much promise of a desirable garden plant, but all material that I recall having under that label was scarcely distinguishable from *P. acuminatus*. If we could get the form mentioned first, we should have, probably, something good and distinct.

In the absence in my northern

garden of *P. laricifolius*, of which *P. aridus* is said to be a form, I am unable to compare the two plants, but the latter, an Oregon plant, is entirely distinct from any beardtongue I have ever grown. Its narrow, downy leaves in a flat rosette and one-flowered stems, a foot high, are distinguishing marks. The color is a good clear blue. The plant is rather short-lived and grows best in extremely dry soil.

Another Oregon pentstemon, and a lovely plant, is *Barrettæ*. It has been short-lived with me, usually passing out after flowering, as do so many of the clan, but this is a factor we have to take into consideration. The theory has been advanced that these short-lived species will be more tenacious of life if they are given an acid soil—a theory that has not been borne out in practice here. It is true that most species (I recall no exceptions at present) do better in an acid medium, though many seem equally at home in one of neutral reaction. It is my opinion that an open, well drained soil, which assures the dry conditions to which most are accustomed, is of more importance. Even then, many species are monocarpic, and that is all we can make of them. It is no reason, however, why we should not enjoy such beautiful material, for gardeners go to just as much work to have annuals and other biennials of less value. But to go back to *P. Barrettæ*, this species has blue gray foliage and erect stems to ten inches or so, carrying a short spike of lavender snapdragon-like flowers.

From the gardener's standpoint, we may group together three scarlet-flowered species, *barbatus* Torreyi, *Eatonii* and *Bridgesii*, as they differ more in height of plant than in other garden characters. The first of these is too well known to need comment, but the other two are seldom seen. *P. Eatonii* is definitely not hardy in my latitude, even plants from the northern end of its range, which Ben Johnson, of Salt Lake City, discovered just before his death, being unable to stand the cold of 1933-1934. In more temperate sections it should prove of great value, its beautiful

crimson, tubular flowers in a simple, strict thyrse on 18-inch stems making a showy specimen. It is highly esteemed in the warmer parts of Europe, where many consider it the best of the genus. *P. Bridgesii* is still smaller, reaching about a foot in height, with its scarlet flowers in clustered spikes at the end of slender stems. I cannot vouch for its long life, but the woody base would normally indicate more than a monocarpic condition.

Two other red-flowered species, *centranthifolius* and *Clevelandii*, might just as well be disposed of at this time. Neither is hardy with me (they come from southern California), but should be from the Ohio river southward. The first has a long, narrow inflorescence, up to three feet, made up of inch-long, bright scarlet tubes, while the other is even more stately in growth, with crimson flowers somewhat shorter than the first-named.

According to Bailey, the following plant should be made a variety, *cæruleo-purpureus*, of *P. confertus*, though it is usually in the trade as *P. procerus* when the varietal name is not given specific rank. Be that as it may, the plant is a desirable one, being perfectly hardy and also quite permanent, more so in the latter respect than most kinds. That fact, coupled with its pleasing blue purple, 2-lipped flowers on foot-high stems, makes a desirable plant. It makes a good rock garden subject as well as being of value as a border plant.

This leads to *P. confertus*, a plant that is often seen in gardens and all too often in its poorest form. The plant varies much in nature, it is said, though most of the material I have grown from wild gatherings has persisted in being a dirty white shade. Sometimes one gets a fairly good yellow, indicating that the plant holds possibilities in the hands of plant breeders. Unless there is better material extant than I have seen, it would appear the part of wisdom to withhold the species from circulation until clear and pleasing shades become fixed.

Not for us of the north is *P. cordifolius*, a southern California species that has almost made a climber of itself. Farther south it should make a good plant for use in shrub borders, where it could clamber through the woody supports. I have kept it over winter on two or three occasions by

laying it down, but that is hardly worth while in ordinary cases. Its inch-long, scarlet flowers come in short, leafy clusters during July.

To be continued.

THE NEW DAWN ROSE.

The fact that it is useful in landscape work as a shrub is adding to the popularity of The New Dawn, a rose already in more demand from year to year because of its qualities as an everblooming climbing rose. It bears the distinction of having been granted plant patent No. 1 under the federal law. It is a sport of Dr. Van Fleet and identical with its parent except that it blooms like a hybrid tea. Realizing that with a case of such a sport, improper selection of bud wood might have a tendency to cause the variety to revert to the June-blooming type, the introducer, the Somerset Rose Nursery, Inc., New Brunswick, N. J., has exercised the greatest care in selection, with the result that the plants there now seem even more free-flowering than originally.

This rose was honored a year ago in the award by the American Rose Society of the Bloomfield gold medal, donated by the late Capt. George C. Thomas, Jr., for the best new climbing rose. It was the first time the medal was awarded. Hardy and vigorous, this climbing rose blooms constantly from June until frost. It produces dou-

ble bluish pink flowers, delightfully fragrant, on long stems excellent for cutting.

FRUIT TREE STOCKS.

In a search for fruit tree stocks that will make a better union and develop larger root systems resistant to disease as well as the colder climate on the northern edge of the fruit belt, horticulturists of the United States Department of Agriculture are testing the performance of individual trees and selecting those that combine qualities nearest the ideal, rigidly discarding all that do not measure up to the highest attainable standard, and then propagating the specimens finally selected by layers or by cuttings from their roots, rather than by planting their seeds.

While these experiments require plenty of work and time, both in finding the best individuals and developing methods of propagating them from root layers or cuttings, successful accomplishment would do away largely with seedling production in quantity, with its problem of seedling variation, seed supply and germination.

This line of experimentation has not yet advanced so far as to demonstrate superior orchard performance from such stocks, but some of the trees developed in this manner and now under test show some outstanding valuable qualities.



The Original Plant of The New Dawn Rose and Its Discoverer.

Fertilization of Shade Trees

Results of Tests at Ohio State University Give Important Data on Feeding Trees in the Nursery — By L. C. Chadwick

Many commercial practices of stimulating growth of shade trees in nurseries and on lawns are based for the most part on assumptions, or on the results obtained from fertilizer experiments with fruits. These, in general, are fallacious practices, first, because it is done blindly, second, because the ultimate objectives in the production of shade and fruit trees are distinctly different.

It is gratifying to observe the increased interest being manifested in the fertilization of ornamental plants both within the nursery and in ornamental plantings. Many years will be required to ascertain many of the important facts underlying correct fertilization practices of ornamentals, the same as has been true with fruits. But we have proceeded far enough toward our ultimate goal so that many practices need no longer be carried out blindly. It seems doubtful that we shall ever reach the stage where recommendations will be made that specify the use of but a single fertilizer to fulfill the requirements of all trees in all types of soils. It seems to me that it is even doubtful if the same fertilizer will be advocated for trees of different ages even though they are of the same kind and grown under similar climatic and soil conditions. It would appear to me that much of the fertilization of ornamental plants in the future will depend upon a careful analysis of the growth conditions of the particular plant or plants in question. Soil and plant tissue analyses can go a long way in determining what is required. Certainly it is not logical or economical to apply a complete fertilizer when nitrogen or phosphorus is all that is required. Neither is it logical nor economical to apply large quantities of nitrogen or the other essential elements, when smaller applications will give a normal and healthy growth. Especially is this true of small plants in the nursery. It is not feasible to stimulate a rapid growth only to remove a large proportion of it by pruning to assure a well shaped plant of natural growth habit.

In the future more attention will be given to the selection of materials

which compose our fertilizers. A number of sources of nitrogen, phosphorus and potassium are available. The choice should depend upon the soil reaction, the availability of the nutrient elements, their effect upon the plant and the cost per unit of the elements desired. To illustrate this may we take for comparison superphosphate and bone meal. Based on present prices in Columbus the cost per pound of phosphorus (P_2O_5) obtained from superphosphate is 5.8 cents and from bone meal 7.2 cents. If an issue is made of the small quantity of nitrogen contained in bone meal, figures will show that the same amount of essential elements contained in 100 pounds of bone meal could be obtained from ammonium sulphate and superphosphate for 3.3 cents less than the cost of the bone meal and, in addition, the elements in ammonium sulphate and superphosphate are more readily available. One could go still further and point out that a still more economical source of nitrogen and phosphorus is ammonium phosphate or the material sold as Ammophos. The cost of enough Ammophos to give the same amount of essential elements as contained in 100 pounds of bone meal would be 31 cents less than the cost of the bone meal.

Even though important as these fundamental practices are to the nurseryman, certain blanket recommendations will have to be given, at present, to the layman.

Experiments pertaining to shade tree fertilization at Ohio State University have been mainly along three different lines: (1) Root distribution, (2) chlorosis of pin oaks and (3) application of fertilizers to shade trees in the nursery.

Root Distribution of Elms.

Little work has been done on the root distribution of ornamental trees. This study is being made to add to the present knowledge of the rooting habit of some of these trees. Such information may lead to more efficient practices of fertilization and transplanting.

Studies have been made from the seedling stage to 1, 3 and 5-inch trees with the diameter measurement being

taken one foot above the grade. The soil in the plot where these trees were dug is a poorly drained, heavy silty clay soil, one which is overlaid with a dark gray silt loam containing a large amount of organic matter and varying in depth from two to fourteen inches. The silty clay loam is underlaid with a gravelly clay loam. On the higher ground the silt loam horizon is shallow and is described as the Miami profile while on the lower areas the silt loam horizon is deeper and approaches the Brookston profile. The pH of the surface layer is 6.5.

Two methods have been used in the root study. The first method is to dig the entire root system as carefully as possible, using a screw driver to loosen the soil around the roots. Then a root count is made of the entire root system. The second method is to loosen the soil from the lateral roots so all of these roots are exposed in their natural position on the surface of the ground. Using stakes and strings the ground is plotted in 1-foot squares, and a graph is made of the root system. A vertical section is made in a similar manner.

An insight of the distribution of roots on these elms can be had by reviewing the following data recorded for one 1 1/4-inch American elm. The spread of the branches was six feet eight inches; the height of tree, nine feet four inches. Most of the lateral roots were from two to three inches under the surface of the soil. The soil was a silt loam, horizon twelve inches deep.

A. Roots in first foot of depth from surface downward.

Lateral No. 1.—13 mm. in dia., 10 feet long. There was no large secondary branching. There were 7 fibrous roots in the first foot of length to a point 8 feet from the base of the tree, where frequent branching started and continued more frequently to the end of the root.

Lateral No. 2.—16 mm. in dia., 10 feet 6 inches long. Same character of branching as No. 1 above. Both of these laterals grew toward an open area in which there were no near-by trees.

Lateral No. 3.—15 mm. in dia., 11 feet long. Started from taproot 7 inches deep and turned upward to 3 inches deep at a point 3 feet from the tree and extended at this depth for its entire length. This lateral started in the direction of a large beech tree and curved away from it, making a 150-degree arc 5 feet from the tree and then curved in a radial direction. As

in the others, this root branched freely at the end, 7 feet from the base of the tree.

Lateral No. 4.—12 mm. in dia., 8 feet long. One 6-mm. secondary branch 1 foot from base of tree. Number of fibrous roots. Up to 1 foot, 6; 1 to 2 feet, 8; 2 to 3 feet, 10; 3 to 4 feet, 18; 4 to 5 feet, 16; 5 to 6 feet, 25; 6 to 7 feet, 31; 7 to 8 feet, very freely branched. Thirty-one fibrous roots less than 2 mm. in diameter were counted in this section.

B. Roots from one to two feet of depth.

Lateral No. 5.—11 mm. in dia., 7 feet long. Two anchor roots within first foot of length. Tapered rapidly to 28 inches and then slowly to the end. One secondary branch 20 inches from tree 7 mm. in dia. and 7 feet long. One secondary branch 28 inches from tree 6 mm. in dia., branching equally 6 inches from lateral and 4 feet long from fork.

Lateral No. 6.—9 mm. in dia., tapering gradually to end, 5 feet long. Up to 1 foot, 16 fibrous roots, 1 to 2 feet, 4 short branches covered with fibrous roots, 14 fibrous roots.

Lateral No. 7.—10 mm. in dia., 6 feet 6 inches long. This root curved upward toward the surface at a point 30 inches from the tree and had the same character of rooting as other roots on this tree. Thirty-one fibrous roots less than 2 mm. in dia. were counted in this section.

C. Roots from two to three feet in depth.

Lateral 8.—5 mm. in dia., 30 inches long. No large secondary branches.

Lateral 9.—3 mm. in dia., 28 inches long. No large secondary branches.

Lateral 10.—2 mm. in dia., 24 inches long. Twenty-seven fibrous roots less than 2 mm. in diameter were counted in this section.

D. Roots from three to four feet of depth.

Five lateral roots 2 mm. or less.

The taproot was 5 feet deep and freely branched, with fibrous roots at the end.

Anchor roots (1) 4 feet from base of the tree, 11 mm. in dia., 40 inches deep, freely branched after the first foot of depth and a mass of fibrous roots at the end. (2) 6 inches from the base of the tree, 8 mm. in dia., 38 inches deep, with 2 branches in the first foot of depth and frequent branching below that, as above. (3) 3 feet from base of tree, 4 mm. in dia., 48 inches deep, branching equally at 9 inches deep, with many fibrous roots at the end. (4) 2 more anchor roots within 1 foot of the base of the tree.

The following general statements may be taken as representing our findings to date.

The figures obtained from these root counts have not yet been compiled, but in all cases there were few fibrous feeding roots directly under the outside spread of the branches. A few lateral roots extended outside of this area and branched freely toward the end. Inside the area covered by the spread of the branches, especially on the older trees, were new roots breaking from the crown and branches from the laterals which gave a large proportion of fibrous roots in this area. Many lateral roots originating twelve to fifteen inches under the surface of the ground curved sharply upward within three feet of the base of the tree and then extended along just un-

der the surface of the soil. Most of the fibrous roots were in the top two to four inches of soil in the locations where the topsoil was shallow and four to twelve inches deep where the topsoil was deeper.

The tendency was for some of the lateral roots of the smaller trees to extend slightly farther, two to five feet, from the base of the tree than the tree was in height. In the larger trees the longest lateral roots were slightly less, one to four feet, in lateral measurement than the tree was in vertical measurement.

In most cases the first root, or taproot, followed an irregular course, sometimes branching into two lateral roots which curved back toward the surface of the soil. In some cases anchor roots branched from them. No roots were found deeper than four to five feet, and these were very close to the base of the tree.

The data obtained in experiments on chlorosis of pin oaks and with applications of fertilizers on shade trees in the nursery will be presented in the next issue.

AUTOGIRO SCOUTS ELMS.

Aërial scouting for diseased trees proved so effective this season that the United States Department of Agriculture recently added a second autogiro as an aid in stopping the spread of plant diseases and insect pests.

Scouting from the air for the Dutch elm disease has resulted in coverage of rough terrain in New Jersey and New York that could have been surveyed by men afoot only with great difficulty. The aërial observers spotted 631 elm trees showing pronounced wilting. Laboratory culturing of samples from the trees collected by the follow-up ground crews showed that eight of these trees carried Dutch elm disease infection.

DANGER IN BANDING.

While spraying is probably more economical and effective than banding shade and ornamental trees to protect them from insect pests, especially cankerworms, the latter method is still used. If it is employed, care should be taken to avoid injuring trees. Ordinary banding materials cannot be applied safely to the trunks of sugar maples, Japanese maples and the smaller red and Norway maples. The adhesive compound used penetrates

the bark, kills the cambium and girdles the tree, causing it to die within a year or two. If insistent upon banding, apply the adhesive to a reasonably thick brown, rather than black, roofing paper wrapped or fastened closely around the trunk. This prevents, to a large extent at least, the banding material's penetrating and injuring the underlying bark.

COST FINDING.

(Concluded from page 6.)

costs. But just as obviously the nurseryman growing products which sell for relatively low prices must keep his costs down or else he is out of business whether he knows it or not.

Here enters the matter of the size of the brush pile; viz., trees or other commodities grown on a chance of selling, but destroyed because of no market. In one form proposed as a basis for calculating costs a notation reads: "Add to the total of the above (growing costs) a sum in the ratio of seventy per cent to 100 per cent on the assumption of an average brush pile of thirty per cent." It is proper accounting procedure to include discounts due to disease, off-quality, faulty bud development or other defects, but it is not proper to include as a cost overproduction due to an unreceptive market, poor salesmanship or poor planning. The effect of these will certainly show in a profit-and-loss statement, but this is a different presentation than is one of costs.

A proposed use of costs is that the findings could serve as a basis for setting uniform selling prices under a marketing agreement. It is pointed out, however, that individual costs and not industry averages must rule when establishing a code. There could be, therefore, a whole series of individual selling prices, provided that no one sold below his cost of production. Although the proposed study cannot be helpful in establishing averages for code use, it can be of substantial aid by informing coöperating nurserymen as to their costs, and hence indicate what their selling price should be, and by establishing a standard accounting procedure, the study can be of use in ascertaining and checking costs of all nurserymen.

Finally, an array of costs from a number of different nurseries can provide a mass of material, the comparing and studying of which can be most helpful to those in the industry.

A. A. N. Committees

Roster of Leaders in Enlarged Activities of National Association for the Current Year

COMMITTEE CHANGES.

On the committees of the American Association of Nurserymen for the coming year, President Clarence O. Siebenthaler has retained the stalwarts who have been responsible for the principal activities of the organization in recent years, adding to the roster here and there members who will strengthen the working personnel.

Of course, the arrangements committee is new, for the preparations for the 1937 convention, at Chicago, July 19 to 22, are in its hands. William J. Smart, of the D. Hill Nursery Co., Dundee, Ill., is chairman, and with him serve Elmer L. Clavey, Deerfield, Ill.; Robert B. Faxon, Glenview, Ill.; Ernest Kruse, Wheeling, Ill.; Hubert S. Nelson, Glenview, Ill.; Charles Fiore, Prairie View, Ill.; F. R. Kilner, Chicago, Ill.; Miles W. Bryant, Princeton, Ill., and Charles Sizemore, Louisiana, Mo.

Added to the legislative committee, under Chet G. Marshall, Arlington, Neb., are B. J. Greening, Monroe, Mich., and P. M. Koster, Huntington Station, N. Y.

To the committee on federal and state nurseries under E. C. Hilborn, Valley City, N. D., are added John Armstrong, Ontario, Cal., and C. B. Miller, Milton, Ore.

On the committee on market development and publicity, Paul Stark, Louisiana, Mo., succeeds to the chairmanship, Paul Fortmiller continuing as a member, with the addition of Robert Faxon, Glenview, Ill., and C. V. Lovett, Little Silver, N. J., to the list of last year.

The committee on botanical gardens and arboreta, headed by Robert Pyle, West Grove, Pa., has as new members E. Y. Teas, Houston, Tex.; R. D. Underwood, Lake City, Minn.; A. F. Sanford, Knoxville, Tenn.; A. M. Augustine, Normal, Ill., and Gordon D. Cooper, Cleveland, O., two being dropped, A. C. Hottes, Des Moines, Ia., and G. M. Bentley, Knoxville, Tenn.

To the quarantine committee, under Albert F. Meehan, Dresher, Pa., has been added Howard Scarff, New Carlisle, O., in the place of W. C. Reed, Vincennes, Ind.

Henry B. Chase, Chase, Ala., continues chairman of the committee on cooperation with the United States Department of Agriculture, with Clayton A. Bunting, Selbyville, Del., and W. C. Price, Towson, Md., as members.

The trade relations committee consists of D. B. Cole, Painesville, O., named chairman last year, and the following members: Maurice L. Condon, Ridgefield, Conn.; W. A. Natorp, Cincinnati, O.; John D. Siebenthaler, Dayton, O., and Richard Wyman, Framingham, Mass.

The executive committee acting as the committee on reorganization of nursery trade associations has advisory members in John Surtees, Ridgefield, Conn.; Robert Pyle, West Grove, Pa., and R. D. Hartman, San Jose, Cal.

On the standardization committee, William Flemer, Jr., Princeton, N. J., becomes chairman, with E. S. Welch, Shenandoah, Ia.; H. S. Chard, Painesville, O.; W. A. Natorp, Cincinnati, O., and Louis Hillenmeyer, Lexington, Ky.

To collect funds for a Washington representative is named a committee composed of William Flemer, Jr., Princeton, N. J.; Howard S. Chard, Painesville, O., and B. J. Greening, Monroe, Mich.

Other committees continue as last year, and the complete roster is in the hands of members with the mailing to them last month of the volume of annual convention proceedings.

CONTACT COMMITTEES.

The Minnesota State Nurserymen's Association was the first to appoint a contact committee to cooperate with the contact committee of the A. A. N., and the members are Ernest Swenson, Lake City, chairman; Paul Eddy, Howard Lake, and John Andrews, Faribault.

The Kansas Nurserymen's Association was second to appoint such a committee, consisting of A. E. Willis, Ottawa; Lawrence Wilson, Kansas City, and W. S. Griesa, Lawrence.

Other associations report the appointment of committees as follows:

Connecticut: Charles S. Burr, Fred S. Baker.

Illinois: Arthur H. Hill, Miles W. Bryant, Arthur L. Palmgren.

Missouri: Paul Stark, George Welch, William A. Weber.

New York: Charles Perkins, Lester Akenhead, Don C. Brown, P. M. Koster.

Northern Retail: W. G. McKay, Bj. Loss, C. C. Marshall.

Ohio: Harry S. Day, W. A. Natorp, Howard Chard.

Tennessee: E. N. Chattin, D. P. Henegar, W. A. Easterly, T. N. Nicholson, F. C. Boyd, Lee McClain.

Western: E. L. Baker, C. C. Smith, E. H. Smith.

Wisconsin: Thomas Pinney, Oscar Hoefer, E. H. Wiles.

MEMBERSHIP COMMITTEE.

The following new members of the American Association of Nurserymen are announced by Secretary Sizemore: J. C. Hale Nursery Co., Winchester, Tenn., and Le-Mac Nurseries, Kenneth McDonald, owner, Box 421, Hampton, Va.

The membership campaign is progressing, and the following have been appointed as chairmen of state membership committees:

Alabama—Henry B. Chase, Chase.
Arkansas—J. L. Murray, Garfield.
California—George C. Roeding, Jr., Niles.
Colorado—Charles C. Wilmore, Denver.
Connecticut—Charles S. Burr, Manchester.
Delaware—Clayton Bunting, Selbyville.
Florida—Simpson Nursery Co., Monticello.
Georgia—H. Stanley Hastings, Atlanta.
Illinois—W. J. Smart, Dundee.
Indiana—Ollie Hobbs, Bridgeport.
Iowa—C. C. Smith, Charles City.
Kansas—J. J. Pinney, Ottawa.
Kentucky—Louis E. Hillenmeyer, Lexington.
Louisiana—Sam Scheinuk, Baton Rouge.
Maryland—W. C. Price, Towson.
Massachusetts—Donald D. Wyman, North Abington.
Michigan—Harry Malter, Monroe.
Minnesota—C. H. Andrews, Faribault.
Mississippi—Clarence Owen, Columbus.
Missouri—A. E. Weston, Neosho.
Nebraska—C. W. Andrews, Arlington.
New Hampshire—L. E. Williams, Exeter.
New Jersey—C. V. Lovett, Little Silver.
New York, eastern—P. M. Koster, Huntington, L. I.
New York, western—E. S. Boerner, Newark.
North Carolina—S. D. Tankard, Jr., Hickory.
North Dakota—E. C. Hilborn, Valley City.
Ohio—James L. Harrison, Painesville.
Oklahoma—Jim Parker, Tecumseh.
Oregon—E. M. Dering, Scappoose.
Pennsylvania—Robert Pyle, West Grove.
Rhode Island—V. J. Vanicek, Newport.
South Dakota—E. C. Hilborn, Valley City, N. D.
Tennessee—J. R. Boyd, McMinnville.
Texas—George Verhalen, Scottsville.
Vermont—George D. Aiken, Putney.
Virginia—Owen G. Wood, Bristol.
Washington—E. M. Dering, Scappoose, Ore.
Wisconsin—W. C. McKay, Madison.

Pacific Coast Joint Meeting

Banner Convention at San Jose, Cal., Held Jointly by California and Pacific Coast Nurserymen's Associations, September 17 to 19

Three days filled with meetings of great interest and social gatherings of equal pleasure were enjoyed by the members of the Pacific Coast and California nurserymen's associations at San Jose, Cal., September 17 to 19. Over 200 members and friends attended the various sessions during these days and the entertainment provided in the evenings.

Probably the two most important features of the business sessions were the steps taken toward securing the actual costs of operating in the nursery business, which will be undertaken by L. J. Kelly under the supervision of R. L. Adams, in charge of farm management at the University of California, and the vote of the California association to present to the coming legislature revisions in the effort toward legalization of grades and standards of nursery stock.

Pacific Coast Officers.

B. A. Mitchell, of the Orenco Nursery Co., Orenco, Ore., was elected president of the Pacific Coast Association of Nurserymen for the coming year. H. M. Eddie, Sardis, British Columbia, was elected vice-president, and Walter R. Dimm, Portland, Ore., was reelected secretary-treasurer. State vice-presidents chosen for the coming year are: Washington—Fred W. May, May Nursery Co., Yakima; Oregon—Earl Houseweart, Houseweart's Nurseries, Woodburn; California—Clyde H. Stocking, Rosedale Nursery, San Jose; Idaho—Lloyd Wright, Kimberly Nurseries, Kimberly; Utah—J. A. Walton, Porter-Walton Co., Salt Lake City; British Columbia—Richard Layritz, Victoria, B. C. The executive committee will include A. H. Steinmetz, Portland Wholesale Nursery, Portland, Ore.; R. H. Hartman, Leonard Coates Nurseries, San Jose, Cal.; Paul Doty, Doty & Doerner, Inc., Portland, Ore.; M. McDonald, Oregon Nursery Co., Portland, Ore., and Harold McFadden, Del Amo Nurseries, Compton, Cal.

Members of the association paid tribute to M. McDonald, Portland, the first and twenty-fifth president of the association, who attended the convention and who was instrumental in raising the budget for the work of the coming year.

California Association Officers.

James R. Crombie, Berkeley, was elected president of the California Association of Nurserymen; Albert Morris, Western Rose Co., San Fernando, vice-president; Jess C. Watt, Ontario, treasurer, and H. W. Kruckeberg, Los Angeles, secretary. Members of the board of control will include J. A. Armstrong, Armstrong Nurseries, Ontario; H. A. Marks, retiring president, Los Angeles; Harold McFadden, Del Amo Nurseries, Compton, and Toichi Domoto, Hayward.

Opening Sessions.

Business sessions for each association were conducted separately, but general programs were heard by the combined groups.

After the address of welcome by a representative of the city of San Jose and a response by M. McDonald, each group met for its business meetings. R. D. Hartman, president, in the annual president's report, stated that conditions on the Pacific coast were gradually improving, said that quality stock still should be the aim of the nurserymen, spoke of the probable effects of the marketing agreement for the California deciduous fruit and almond tree growers which went into effect September 18, and called attention to the increasing number of nurseries being conducted under the auspices of the government.

Walter R. Dimm, secretary-treasurer, gave the report of the financial standing of the association. He urged the members to send in material for the Pacific Coast association's bulletin.

State Reports.

A more cheerful outlook in Washington was reported by F. W. May in the absence of the state vice-president, R. G. Gamwell, Bellingham. He told of the increased demand for the use of ornamentals and trees for home use. He spoke of the effect of taxes and the competition of chain stores on prices.

Speaking for Roy Woodruff, Eugene, Ore., Paul Doty, Portland, said that conditions seemed more promising than for several years, with the increase of building, and that nurserymen are hoping there will be an active season this autumn. Advance orders for roses have been satisfactory, and first-grade roses are about sold out. There may be a small surplus of walnut trees, but the supply of filberts is about out, he reported.



H. A. Marks and R. D. Hartman.

ported. Prices have not changed materially.

F. W. Settlemier, Woodburn, Ore., reported the average nurseryman had about enough stock for the normal demand. J. A. Armstrong, vice-president for California, said prospects are better than for the last five years for ornamentals and fruit trees and that nurserymen are justified in a reasonable increase in their stock. The present shortage of ornamentals in southern California, he thought, would be soon remedied. Prices are from five to twenty per cent higher and still somewhat on the increase on account of higher wages and taxes. He reported the Southern California Horticultural Institute is working satisfactorily and hoped to see it extended to the entire state.

Conditions in Idaho have improved, according to the report by David C. Petrie, Boise, state vice-president. Richard Layritz, Victoria, B. C., spoke of improved conditions across the Canadian border.

Mr. Smith, Smith Bros., Brigham, gave a report on conditions in Utah, telling of the after effects of a freeze several years ago and the necessity for replanting large areas of fruit trees. The increased use of evergreens and roses is a feature of the buying now.

California Reports.

H. A. Marks, Los Angeles, president of the California nurserymen's association, presided over the business meeting of the association and was followed in his report by that of the secretary, Henry W. Kruckeberg, and the treasurer, Jess C. Watt. Reports of standing committees included that on arbitration, by L. P. Sorenson, Bakersfield; citrus-tropical fruits, F. A. Tetley, Jr., Riverside; government nurseries, Roy F. Wilcox, Montebello; insects and diseases, M. P. Sessions, North San Diego; membership, H. A. Marks, Los Angeles; native vegetation, Theodore Payne, Los Angeles; nomenclature, Toichi Domoto, Hayward; program, R. D. Hartman, San Jose; trade exhibits, H. Plath, San Francisco; transportation, A. W. Elm-lie, Ontario, and viticulture, M. R. Jackson, Fresno.

Fruit Tree Situation.

The supply of first-year fruit trees is under normal, was the report of Wayne McGill, Fairview, Ore., in his paper on "The Fruit Tree Situation in the Northwest." Those two years old are scarce for all varieties and are bringing good prices. An increased demand is expected for fruit trees and the material is good on account of weather conditions this year.

J. E. Bergthold, Newcastle, Cal., stated in his talk on "The Fruit Tree Situation in California," that he believed that large promotional plantings were unwise and that the increase should be made from the average of the past two years. Changes in the eating habits of the general public, with larger use of vegetables the entire year,

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SAN JOSE, CALIFORNIA

have cut down the consumption of fresh, canned and dried fruit, he stated, along with an increase in the use of bananas, oranges and grapefruit. The export field since the war has been reduced on account of the general policies and there is no present outlook for a change there.

H. William Nelle, public relations counsel, Oakland, told of the efforts of the association which resulted in the California deciduous fruit tree marketing and industry agreements. The agreements went into effect September 18. When the plan has been worked out and proved satisfactory for fruit trees, it is planned to extend it to other fields.

In the absence of Prof. George J. Pierce, professor emeritus of botany, Stanford University, and president of the California Botanical Society, Mrs. Bertha Rice made an appeal for the association to help in stopping the menace of the commercial plant and bulb collector. She urged the conservation of the wild flowers.

Talks on Credits.

In an interesting talk on "Getting and Giving Credit," Harry E. Magee, of Dun & Bradstreet, Inc., urged that business men file an annual report with the company, making the statement as complete as possible, and the statement would be analyzed and copies sent to strategic centers in the United States for the purposes of getting credit. He urged the use of their credits. Since this is a sellers' market, he urged close watch on collections. He stated that the business man cannot know too much about his customers.

A. H. Steinmetz, Portland, Ore., in his talk on "Experiences of a Wholesale Nurseryman Handling Credits and Collections in the Nursery Field," said he considered credits and collections a major part of the work in this field and that nurserymen trust to luck more than necessary. He stated that by growing good stock and by remembering that it was not necessary for any one firm to grow enough to supply the entire field, he believed some of the difficulties would be overcome.

Second Day's Sessions.

Friday morning the convention heard a paper, "Nursery Production Cost: An Essential to Success," by John Surtees, Ridgefield, Conn., read by Henry W. Kruckeberg. A reliable cost system benefits business and operates for its complete control, wrote Mr. Surtees. Time is the basis upon which to base a cost system for nurseries, and most cost systems fail because of the wrong basis, he stated. Cost finding protects everyone.

Clarence G. Perkins, talking on "Patented Roses, Observations and Suggestions," explained the patent provisions under which a rose or any other plant may be patented. So far, the United States is the only country which grants plant patents. Some other countries are considering granting such patents, and then growers may enjoy reciprocal privileges. As it stands, there is no protection for patented plants outside the United States. He further explained that the government does not assure the reliability of a plant on the issuing of a patent. But a rose, he stated, is usually good if it is patented. No rose is good under all conditions, and

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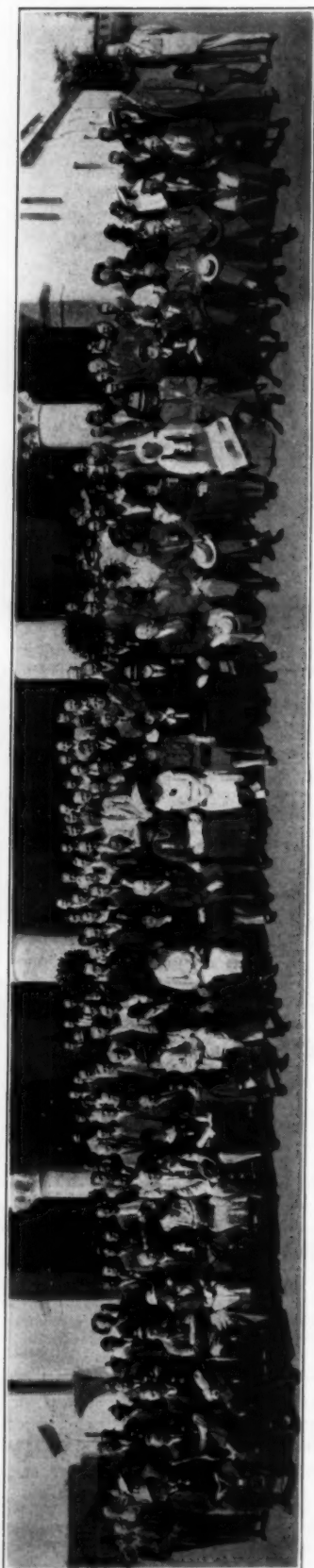
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Members and Guests at the Joint Convention of the Pacific Coast and California Associations of Nurserymen, September 17 to 19, at San Jose, Cal.

the problem of the grower is how far from the point of origination it will give its advertised performance. A patent gives the producer the opportunity to advertise, he stated.

Newer Plants.

W. B. Clarke, San Jose, gave an interesting survey of "Ornamentals of Recent Introduction Possessing Commercial Value." His list was primarily of those plants which will live in a climate similar to that of northern California. The newer plants, it was discovered, sold during the depression when standard stock remained in the hands of the grower. As a result, a large number of nurserymen have interested themselves in introducing new things, and it is expected the next few years will see a great enrichment of the varieties.

Lack of moisture in southern California, explained Hugh Evans, Santa Monica, in his talk on "New and Little Known Ornamentals That Can Be Recommended, Southern Group," precludes many ornamentals which are grown in the northern area. Lime and alkali in the water have to be overcome by additional materials, and the drainage needs to be considered. He believes California needs more evergreen trees. Varieties of eucalyptus, vines such as Beaumontia grandiflora and Bougainvillea prateriense, Cassia splendida and Cassia superba were among the long list of plants mentioned.

"Cost Finding as Applied to the Nursery Business" was the subject of the talk by Prof. R. L. Adams, in charge of farm management at the University of California, Berkeley. According to Professor Adams, this includes every item which goes into the growing of the nurseryman's stock, but does not include the cost of selling. Cost finding, and its use, will give the means of intelligent reorganization of a man's individual business and affect his profits. The university is taking up the study of the cost of growing fruit trees and may take up that of growing roses later.

After luncheon, Walter R. Dimm gave an interesting talk on "The Advertising and Selling of Nursery Stock."

Grading Regulations.

J. D. Meriwether, chief of nursery service of the California department of agriculture, Sacramento, gave his annual report, revealing encouraging trade betterments.

A. A. Brock, director of the California department of agriculture, talked on the industry and the department of agriculture. He explained the policies of the department in quarantines and the reasons for these policies. He also talked on the new marketing agreement which has been filed and approved by the department. The setting up of fair trade features seems to offer a good plan, he stated.

"Legalizing Grades and Standards of Nursery Stock," by George C. Roeding, Jr., chairman of the plant standardization committee of the California Association of Nurserymen, was the subject of much interest. Some revision of the grades on last year's schedule was deemed necessary. For roses, No. 1 is large; No. 1½, medium; No. 2, small, and No. 3, culls. An agreement, passed by the association last year, was

amended in accordance with the California fruit tree marketing agreement. These amendments were accepted by the association and will be presented at the legislature next winter.

D. B. Mackie, supervising entomologist of the California department of agriculture, talked on "A New Method of Vacuum Fumigation of Nursery Stock." Dr. Mackie is conducting experiments with metal bromide and reported on the results which he has secured so far.

Next Convention Cities.

Portland, Ore., was chosen as the next convention city for the Pacific Coast Association of Nurserymen, and Oakland, that for the meeting of the California Association of Nurserymen; time for the meeting in Portland will be announced later. September is the month chosen for that in California, the exact dates to be set by the committee.

The Pacific Coast association decided upon continuing the work of the Pacific Coast Protective Association, which will be a clearing house for credits for its members. Dun & Bradstreet, Inc., will be used for ratings and special reports. The association will send out bulletins showing credit changes and information, so that its members may do business with a thorough knowledge of the credit standing of their customers.

Entertainment.

But with all the serious meetings of the convention, there was still time set aside on the program for entertainment. A get-together luncheon was held at the Hotel Sainte Clair, Thursday noon, when Roy F. Wilcox, president of the Southern California Horticultural Institute, presided. Jess C. Watt, Ontario, was song leader. The ladies at the same time had a luncheon at O'Brien's and then left for a trip up the peninsula, through Stanford University grounds, and had tea at the Allied Arts Guild in Menlo Park.

Thursday evening, moving pictures, taken in the Hawaiian islands by George C. Roeding, Jr., gave the members and friends "A Night in Hawaii." Hawaiian music and dancing were part of the entertainment.

Friday, the ladies had a luncheon at the San Jose Country Club, followed by cards and election of officers. Mrs. Clarence G. Perkins was elected president of the Ladies' Auxiliary for the coming year. Friday evening over 200 attended the annual banquet, when G. S. Wallace and his committee presented many interesting entertainers.

The social events culminated in a barbecue held at San Jose's delightful Alum Rock park. Races, games and a baseball game between the north and the south followed, and the final session of the convention was presided over by H. J. Scherer, Long Beach, who with inimitable wit presented the various prizes to the contestants.

Many of the nurserymen remained in San Jose on Sunday to visit the various nurseries in and around San Jose and in the bay area.

Trade Exhibits.

One of the interesting features of the convention was the nursery equipment and accessory show, held in the new civic auditorium. This exhibition, which received considerable publicity in the local newspapers, was open to

the public. It also proved a convenient meeting place for the members before and after the meetings, besides providing them with exhibits of new and interesting plants and accessories. Included in the show were the following exhibits:

Antrol Laboratories, Inc., Los Angeles—House and garden pest controls.
Armstrong Nurseries, Ontario—Nursery stock.
Balfour-Guthrie Co., San Francisco—Spray materials.
California Nursery Co., Niles—Nursery stock.
California Plow Co., San Jose—Barbecue pits.
California Spray-Chemical Corp., Berkeley—Sprays.
Carlisle & Co., San Francisco—Printing and catalogues for nurserymen.
Clorox Chemical Co., Oakland—Sprays.
Leonard Coates Nurseries, San Jose—Nursery stock.
Farmer's Union, San Jose—Garden and nursery supplies.
Garden City Pottery Co., San Jose—Pottery.
Growers' Fertilizer Co., San Francisco—Fertilizers.
H. D. Hudson Mfg. Co., San Francisco—Sprayers.
H. V. Carter Co., San Francisco—Lawn, garden and golf course equipment.
Hayes Universal Spray Gun Co., Berkeley—Gun sprayer.
Jackson & Perkins Co., San Jose—Roses.
Mills Orchards Corp., Hamilton City—Spray materials.
John Bean Mfg. Co., San Jose—Spray equipment.
Lansing Co., San Francisco—Push carts.
McCormick Sales Co., San Francisco—Sprays.
Nicolene Products Corp., Clarksville, Tenn.—Insecticides.
Pacific Guano Co., Berkeley—Fertilizers.
Pacific Coast Nursery, Portland, Ore.—Nursery stock.
H. Plath & Sons, San Francisco—Plants.
Peat Import Corp., Los Angeles—Peat.
Railway Express Agency, Burlingame—Shipping.
Roberts Co., Burlingame—Insecticides.
Rototiller Tractor Sales & Service Co., San Leandro—Tractors.
Rush-Wheeler Nursery Co., San Jose—Roses.
Sherwin-Williams Co., Oakland—Sprays.
Swift & Co., South San Francisco—Fertilizers.
Tobacco By-Products & Chemical Corp., San Francisco—Sprays.
U. S. Espallier Nursery, Portland, Ore.—Espallier fruit trees.
West Coast Nursery, Palo Alto—Nursery stock.
Western Pump Co., San Jose—Nursery pump equipment.
Roy F. Wilcox & Co., Montebello—Palms and ferns.
Wilson & George Meyer & Co., San Francisco—Swedish peat moss.
California Department of Agriculture, Sacramento.
Houghton-Mifflin Co., San Francisco—Books.
Macmillan Co., San Francisco—Garden books.
McDonald Publishing Co., San Francisco—Garden magazines.
Pacific Portland Cement Co., San Francisco.

Arrangements Committees.

Members of the Central California Nurserymen's Association were hosts for the convention. The reception and registration committee included Clyde H. Stocking, chairman; Albert E. Buhot, James R. Crombie, Walter A. Hoff, William B. Tuttle, G. S. Wallace, Mrs. James R. Crombie, Mrs. R. D. Hartman, Mrs. Walter A. Hoff, Mrs. Clarence G. Perkins, Mrs. George C. Roeding, Jr.; Mrs. Clyde H. Stocking, and Mrs. G. S. Wallace.

The general committee of the combined associations consisted of R. D. Hartman, general chairman; Merrit A. Vinson, secretary; Clarence G. Perkins, treasurer, and George Budgen, Albert E. Buhot, W. B. Clarke, James R. Crombie, Toichi Domoto, Walter A. Hoff, A. Plath, George C. Roeding, Jr.; R. L. Cody, F. J. March, W. B. Tuttle and Clyde H. Stocking.

On the finance committee were George C. Roeding, Jr., chairman; Clarence G. Perkins, treasurer, and W. B. Tuttle. On the trade exhibits committee were George C. Roeding, Jr., chairman; Toichi Domoto, and Merrit A. Vinson.

Other committees were: Plant exhibits—H. Plath, chairman; Walter A. Hoff, and W. B. Clarke; entertainment—G. S. Wallace, chairman; Walter A.

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Evergreen Trees	Greenhouse and
Shrubs	Bedding Plants
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Evergreen Shrubs	SEEDS
Roses	

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100,000 two-year-old, hardy, northern California-grown roses. Good standard varieties, also new kinds now offered at the lowest prices we have ever sold roses. Thirty years' experience growing roses.

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Hoff, and Frank Tuttle; decorations—Walter A. Hoff, chairman; George Smith, and Jack Mieuli; Ladies' Auxiliary—Mrs. R. D. Hartman, chairman; Mrs. George C. Roeding, Jr.; Mrs. H. A.

Marks, and Mrs. G. S. Wallace; barbecue and sports—Clarence G. Perkins, chairman; C. M. George, R. D. Hartman and Mrs. Clarence G. Perkins; transportation—A. Eddie, chairman; Ken-

neth Hartman, and O. A. Stalker; county and state exhibits—L. R. Cody, chairman; Max Leonard, Gordon B. Laing and Fred J. March.

Vetterle & Reinelt, Capitola, furnished a complimentary display of tuberous-rooted begonias. Ballay Dahlia Gardens, Palo Alto, had a showing of their decorative dahlias. H. A. Hyde & Co., Watsonville, furnished boxed bay trees for the decoration of the front and lobby of the auditorium during the convention. Eric James, Oakland, had a showy display of celosias. The Del Monte Nursery, Del Monte, had a display of nursery stock.

Side Lights on Displays.

The auditorium at San Jose, Cal., in which the Pacific Coast and California nurserymen's associations held their convention was attractively decorated both inside and out. H. A. Hyde, Watsonville, Cal., brought up some beautiful specimens of bay trees and placed them outside the main doors, at the entrance to the auditorium where the trade and flower show was held, and also on the stage of the theater. Mr. Hyde has been specializing in these for over ten years and used both the standard and pyramid types in his decoration. He reports he is bringing in the new Boysenberry and new giant everbearing raspberry plants for the trade.

J. S. Whyte, of Southern California Floral Industries, Inc., Los Angeles, sent a basket of flowers for the speakers' table. And a beautiful bowl of Dame Edith Helen roses arrived during the convention from Avansino, Mortensen & Co., San Francisco.

H. M. Eddie, Sardis, B. C., received a gift from the convention for the delegate making the longest trip to attend the convention.

M. McDonald, of the Oregon Nursery Co., Portland, Ore., has been a member of the Pacific Coast Association of Nurserymen since its inception in 1901, when he was its first president. Twenty-five years later he was again elected president, and credit for the raising of the budget for the work of the association for the next year goes to this grand old man, who is still just as keenly interested in the welfare of the nursery industry as he was when he started. H. W. Kruckeberg, Los Angeles, secretary of the California Association of Nurserymen, in introducing him, said that much credit for all that the nurserymen are now enjoying goes to those early pioneers, for "the action of yesterday predicates the action of today."

One of the interesting plants in the display of Roy F. Wilcox & Co., Montebello, Cal., was *Pothos aureus* Wilcoxii, which was introduced two years ago. This variegated, light green plant is being used for wall pockets, glazed pots and hanging baskets. *Beloperone* is an easily grown plant shown. This grows outdoors on the coast, but indoors and potted in the east. Its rust-brown blooms look like plumy hops. *Philodendron* totem poles, *araucarias*, *strelitzias* and *Ficus homeri* were also exhibited.

Invited to Fruit Growers' Meet.

Members of the associations who are interested in fruit trees have been invited to the fruit growers' convention,

which will be held December 14 to 16 in Bakersfield, Cal.

George C. Roeding, Jr., of the California Nursery Co., Niles, in a brief talk, explained the present plan for the Golden Gate International Exposition which will be held in San Francisco in 1939. It is expected that the fairgrounds will be landscaped beautifully and, in addition, nurserymen can buy space for their individual exhibits.

J. A. Armstrong, of the Armstrong Nurseries, Ontario, Cal., who had an exhibit of plants at the trade show, reports that they are getting ready for the fall season and, for one thing, are building additional lath houses in the sales yard for the display of stock.

C. W. Ballay, Palo Alto, Cal., showed some of his beautiful dahlias at the trade show, exhibiting *Miss Glory*, a soft apricot yellow of the semicactus type; *California Idol*, a clear yellow decorative; *Leland Stanford*, and *Grandee*, an opal-red shading to orange yellow, informal decorative.

The California Nursery Co., Niles, had its usual attractive trade display, the center of attraction in it being a small house on which myrobalan seeds were used for the roofing and the walks around it. Boxwood, roses and fruit trees were included in the display.

Walter A. Hoff, of the West Coast Nursery Co., Palo Alto, had a display from the Brandt estate at Hillsborough which he landscaped.

Need Plant Introduction Station.

J. A. Armstrong reported the need of an additional federal plant introduction station. He also advised nurseryman to be on the lookout for new things to grow.



James R. Crombie.

The Jackson & Perkins Co., San Jose, was showing a new crested corymbis, a new white aster, which the firm has named *Mount Everest*, and *Towers of Gold*, one of Burbank's tritomas. In the rose display, *Eclipse*, a light cream rose with long buds, uniform blooms and an erect, tall bush, was one of the interesting varieties. *Signora*, a 1936 introduction, has good foliage and hard wood and, though a prolific bloomer, does not flower on the coast until May. It is burnt orange in the center shading to apricot and variegated with red, is extremely double and opens up well. *Yosemite* has a small, well shaped bud, salmon color, with sepals that cling to the sides, giving green up around the bloom. *Radiant Beauty* is cerise and 2-year-old bushes are being offered this year. All are good for outdoor growing. A good outdoor rose is *Golden Main*, a clear canary yellow, with short-stemmed blooms on a large well shaped bush.

The Ruehl-Wheeler Nursery Co., San Jose, in its exhibit of roses showed the popular *Victoria Harrington*, a dark red rose which has a good-shaped bud and good foliage.

H. Plath & Sons, San Francisco, showed some of the rhododendrons upon which they have been working for the past several years. Other plants from their nurseries were included in the display, among them hydrangeas.

Ernest Rober, of the West Los Angeles Nursery, Los Angeles, brought a few of his geranium blooms to exhibit. Mr. Rober, who came to the Pacific coast from the east some years ago, is specializing in geranium and pelargonium varieties and includes 175 geraniums in his list. In his nursery, which covers seven acres, he has more than 200 varieties under glass and lath. Of particular interest for the winter will be the *Poinsettia* geranium, a Christmas red. This has narrow-petaled double flowers, giving them the appearance of miniature poinsettias. *Sweetheart*, with a heart-shaped center; *Stars and Stripes*, with small double white flowers and red stripes and small foliage; a rose-red pelargonium; *Jeanne*, with unique cluster of bright salmon rose florets and light green foliage, notched at the edges, and *Flame*, a red described by its name, are among the varieties that will be introduced in 1937. *Tomentosum*, a velvet-leaved ornamental; peppermint and wintergreen geraniums, *California Giant Pink*, an outstanding bloomer, and geraniums trained similar to standard rosebushes are some of the interesting plants he is producing.

Plan Show at Busch Gardens.

Pasadena, Cal., will have a flower show in the Busch gardens on the Annheuser-Busch estate October 30 to November 1, inclusive. Lloyd C. Cooper, manager, had a booth among the trade exhibits at the convention and explained the plans for the coming event. This is a nonprofit organization, the objective of which is to establish a permanent botanical garden in Pasadena. It is planned to have fall and spring shows, also showings in summer of blooms available at that season.

The show will be held outdoors, with plenty of room for all the exhibits. Cut flowers will be displayed in a Spanish arbor, while the center of the exhibit will be built around an early

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Concolor Fir, 2-yr. seedlings	15.00
Douglas Fir, 2-yr. seedlings	15.00
Ponderosa Pine, 2-yr. seedlings	12.00
Siota Orientalis, green, 8 to 14 ins.	15.00
Siota Orientalis, Aurea, 6 to 10 ins.	15.00
Japanese Larch, 10 to 15 ins., seedlings	14.00
Norway Maple, 8 to 12 ins., seedlings	14.00
Norway Maple, 12 to 15 ins., seedlings	20.00
Shagbark and Shellbark Hickory, 2-yr. seedlings	9.00
Box Elder, 4 to 6 ft.	18.00
Austrian Pine (heavy stock), 8 to 12 ins.	16.00

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Lulus sultriflora and B. sempervirens.
Selected uniform plants; bushy and foliaged to
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mens from 4 inches up, ready for quick shipment.
Prices lower, plants larger. Ask for special list.
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California plaza. Garden clubs, the United States forest service, the California state parks department and various commercial exhibitors are included in the list of those who will help to make the show a success. Charles Gibbs Adams, Ralph B. Cornell and Mrs. Fletcher Dobyns, landscape architects, will have charge of the landscaping in the natural setting of the gardens. F. B. Nightingale will have charge of the illumination of the show at night.

CALIFORNIA MARKETING PACT.

A. A. Brock, California director of agriculture, has approved a marketing agreement for the state's deciduous fruit and almond tree nursery industry.

Its jurisdiction covers all species of deciduous fruit and almond trees, but does not include other nut trees. The nurserymen within its provisions, effective September 18, number 107. California nurserymen sold about 2,700,000 trees, with a gross sales value of nearly \$500,000, last year.

The agreement creates a tree industry board to administer the act, composed of J. E. Bergtholdt, Newcastle; E. F. Fowler, Newcastle; George C. Roeding, Jr., Niles; T. B. Stribling, Merced; Ray Stuart, French Camp; William T. Kirkman, Jr., Bethany; Thomas Maxwell, Napa; Ray D. Hartman, San Jose, and J. A. Armstrong, Ontario.

SHADE TREE CONFERENCE.

The twelfth national shade tree conference brought to Boston, Mass., September 2 to 4, over 400 persons from many states to listen to a series of papers, largely of a scientific nature relating to shade tree problems. While largely composed of men engaged in research work in universities and experiment stations, the conference brought a few nurserymen, landscape contractors and commercial arborists.

The program of papers was announced in full in The American Nurseryman of August 15. These papers will be published in the conference proceedings and available later at a nominal fee from the secretary.

One afternoon was occupied by a trip to the Waltham field station of Massachusetts State College and another by a trip to the Arnold Arboretum, where members of the staff contributed interesting comments.

The following officers were elected: President, Dr. C. C. Hamilton, New Brunswick, N. J.; vice-president, Dr. Carl Dressel, East Lansing, Mich.; secretary-treasurer, Dr. R. P. White, New Brunswick, N. J.; editor, Dr. L. C. Chadwick, Columbus, O.; executive committee, H. L. Frost, Arlington, Mass.; H. M. Van Wormer, Richmond, Va., and W. E. Parker, Englewood, N. J.

Baltimore, Md., was selected as the place of the 1937 conference, and H. Stevenson-Clopper was chosen local chairman.

The American Society of Arborists re-elected its officers, Charles F. Irish, Cleveland, O., president, and Norman Armstrong, Poughkeepsie, N. Y., secretary.

THE White Oak Ridge Nurseries, Short Hills, N. J., have been incorporated for \$50,000.

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3 feet to 9 feet

Grown right — priced right

— Peonies —

30 choicest new and standard varieties.
Only young, healthy roots furnished.

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Lancaster, Pa.

PRIVET and BERBERIS

Splendid Stock

Write for Special Quotations

LESTER C. LOVETT

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BURR'S QUALITY SEEDLINGS

Ampelopsis Veitchii and Barberry
Thunbergii Seedlings. Extra fine quality
at right price.Complete line of general nursery
stock. Let us quote you on your re-
quirements.
C. R. BURR & CO., INC.
Manchester, Conn.

Princeton Nurseries

of PRINCETON, N. J.

SUPERIOR

Hardy Ornamentals

Trade Aids Recent Shows

Nurserymen's Displays Prominent in New Event at Chicago and at Recent Michigan State Fair

NEW EVENT AT CHICAGO.

Show at Stock Yards.

Nurserymen gave conspicuous aid in staging the first International Horticultural Exposition at the International Amphitheater, Union Stock Yards, Chicago, September 12 to 20. A couple of days of 90-degree heat fortunately did not affect their displays as it did the flowers.

An ambitious endeavor, the exposition came close to occupying fully the five large halls that make up the amphitheater, a modern, well lighted, well ventilated structure. The main arena contained the feature of the exposition, a replica of the famous hanging gardens of Babylon, with several stepped-back terraces extending almost to the roof of the high-vaulted room. Palms, shrubs and evergreens masked supporting colonnades, while wild smilax festooned the railings above the arches. Hanging plants showed in the blue-lighted recesses.

Landscapers Aid.

The materials used for decorating the hanging gardens, as well as for the planting at the base, including birches, evergreens, willows, oaks and various shrubs, were supplied by members of the Illinois Landscape Association, as follows: C. D. Wagstaff & Co., Evanston, Ill.; Claus Bros., Chicago; Otto N. Stein, Chicago; Swain Nelson & Sons Co., Glenview; Charles Fiore Nurseries, Prairie View, Ill.; Hinsdale Nurseries, Hinsdale, Ill.; Schroeder's Nursery, Morton Grove, Ill.; Eugene A. de St. Aubin & Bros., Inc., Addison, Ill., and Beaudry & Associates, Chicago.

At one of the main arena entrances and directly opposite the hanging gardens, appeared two flanking groups of evergreens arranged as backgrounds for statuary. These were placed by the members of the University Horticultural Society, the stock being donated by the Charles Fiore Nurseries.

Italian Garden.

One entry was a splendid Italian garden, designed by the Charles Fiore Nurseries. Here triangle-shaped beds bordered both sides of a path, that divided to go around a fountain with a flagstone coping and continued to a recess in a bank of deciduous and evergreen trees where a statue rose above a bed of pink asters. The identical facing beds along the sides contained *Dianthus Beatrice* and *veronica*, *vincas*, *roses*, *Anemone japonica*, and *Lilium rubrum* and *Salvia farinacea*. *Arbor-vitae* inclosed the garden at the sides. The beds were grass-bordered, with edgings of small yews. Larger yews and standard specimens of *Viburnum Carlesii* supplied accents.

Mr. Fiore also had a wellhead garden backing up to the larger planting, but shielded from it by the tall tree group. The stone wellhead was at one side and a bench at the other, with Lilliput *zinnias*, *ageratums* and white asters at the base of the tree screen.

The competitive section for nursery

stock, shown in the south lower hall, brought out splendid material. There were several special plantings and entries in five classifications for five evergreen specimens each.

First prize for a formal green garden was won by the Hinsdale Nurseries. A rectangular space was planted, with an *arbor-vitae* hedge along the sides and a high screen of evergreen and other tree specimens at the end opposite the entrance. A path through the center divided around an ornamental fountain and went on to the back, where there was a bench.

Naperville Nurseries, Naperville, Ill., had a fine arrangement, not in competition, but remarkable for choice stock. This was a rectangular planting, with a central area of grass and border plantings chiefly of evergreens. Noted were silver junipers, *Picea albertiana* *conica*, *Juniperus scopulorum* and *Meyeri*, blue spruce, *Picea pungens*, gold-tipped junipers, mountain ash in fruit and pyramidal birches.

Outdoor Fireplace.

The Swain Nelson & Sons Co. installed an outdoor fireplace, flanked by huge evergreens. The Mission Gardens, Techy, Ill., combined nursery stock, beds of small flowering plants and vases of cut gladioli in an arrangement that had for the center a pedestal fountain above named *phloxes*.

The Warrenville Berry Farms, Warrenville, Ill., planted an interesting berry garden, that was decorative as well as practical.

Entries of specimen plants were made by Charles Fiore Nurseries, Palmgren's Nurseries, Glenview, Ill.; Schroeder's Nursery, Swain Nelson & Sons Co., Mission Gardens and Hinsdale Nurseries.

FINE SHOW AT MICHIGAN FAIR.

Due to Trade's Exhibits.

For the first time in several years, the nurserymen of Michigan joined last month to make the flower and garden show of Michigan's state fair a truly fine exhibition. In a hall beautifully

decorated with evergreens, their gardens formed a fitting background for the excellent displays of cut flowers and flower arrangements. The fair was held at Lansing. It would be difficult to select the best of the gardens. They were all quite different and attractive. Edelweiss Gardens, Detroit, staged an exceedingly interesting tank garden, in which they featured many rock plants, succulents, fine rockwork and a good pool planting. The Sunset Water Gardens, Holly, again featured their water garden, showing a pool filled with water lilies and water hyacinths. This firm also staged an impressive rockery, featuring high falls and pools, in the Ford exhibit.

Hav' Alook Gardens, Fowlerville, staged an interesting garden with an evergreen border and small pool, around which were planted some fine tuberous-rooted and wax begonias. The Pontiac Nurseries, Romeo, had a fine perennial border featuring delphinium and violas that attracted considerable attention. The garden of the Monroe Nurseries, Monroe, was extremely restful, with an attractive evergreen border of excellent specimen junipers. The more formal garden of the Greening Nursery, Monroe, greeted the visitors as they came in the front door and was given unanimous approval. A rock wall and green terrace backed with beautiful specimens of evergreens, mountain ash and viburnums made this a highly creditable showing.

RADIO GARDEN TALKS.

September 15, the time of the Radio Garden Club program broadcast over station WOR, every Tuesday and Friday afternoon, was changed to 3:15 from 2:45.

This should be of interest to the trade in the east, for these programs carry real information to the gardening public, and some of them quite merit florists' and nurserymen's attention for the information they contain. It would be well worth while to keep your customers informed on these radio talks, or to have a radio going in your store at that hour, for the more the public knows about plants and gardening, the better all our business will be.

Mimeographed copies of these radio talks are issued, and after reading them from week to week, it can fairly be said that these are among the best of their type that have gone over the air.

Working in cooperation with the agricultural extension service of Rutgers Uni-

1887

1936

We offer for Fall, 1936, and Spring, 1937, our usual line of

HARDY DECIDUOUS FLOWERING SHRUBS

HEDGE PLANTS, EVERGREENS

FOREST AND SHADE TREES

VINES AND CREEPERS

FOREST TREE SEEDLINGS FOR SOIL EROSION CONTROL

NATIVE PLANTS FOR PARKS AND ROADSIDE PLANTING
IN BOTH NURSERY-GROWN AND COLLECTED STOCK

NATIVE FERNS

NATIVE TREE SEEDS

Write for our forty-eight page fall trade list
and send your want list for special quotations.

Established 1887
By J. H. H. Boyd

FOREST NURSERY CO.
McMINNVILLE, TENN.

J. R. Boyd
President

..... a good supply of
SOUR and SWEET CHERRIES
APPLE — PEACH — PEAR
ORNAMENTALS — ROSES

PRIVET AMOOR NORTH
FRUIT TREE SEEDLINGS
DECIDUOUS SEEDLINGS

Write for new **TRADE LIST**,
 just off the press.

Will appreciate your **WANT**
LIST.

MOUNT ARBOR NURSERIES

E. E. Welch, Pres. Shenandoah, Iowa

"One of America's Foremost Nurseries"

20,000 **CHERRY**, Montmorency and
 Early Richmond, 2-year, XX
 and 1/4 inch.
 5,000 **SPIRÆA**, Vanhouttei, 3 to 4 feet
 and 4 to 5 feet.
 20,000 **ELMS**, American, Vase and Mo-
 line, transplanted, up to 4
 inches.
 10,000 **MAPLE**, Norway, transplanted,
 up to 3 1/4 inches.
 2,000 **ARBOR-VITÆ**, Pyramidale, up
 to 8 feet.
 400 **PINE**, Mugho, from 3 to 4 feet.
 1,000 **SPRUCE**, Norway, sheared, none
 better, 3 to 5 feet.
 500 **JUNIPER**, Pfister's, 5 to 8 feet
 spread, beauties.
 2,000 **ARBOR-VITÆ**, American, and
 RETINOSPORAS, 4 to 7 feet.
 Send for list on many other items.

C. M. HOBBS & SONS, Inc.

Bridgeport, Indiana

Largest Nursery in Indiana. Established
 1875.

Evergreens, Broad-leaved Evergreens,
 Deciduous and Ornamental Trees,
 Flowering Shrubs, Barberry, Privet,
 Hardy Perennials and Rock Plants --
 Fruit Trees and Small Fruits --
 Lining-out Stock.

PEACH TREES

A fine general line, including a
 large supply of Elberta, Golden
 Jubilee and South Haven.

Write for quotations and our Wholesale Trade
 List.

The WESTMINSTER NURSERY
 Established 1893 Westminster, Maryland

JEWELL Wholesale

Hardy Minnesota-grown
 Nursery Stock and Liners

THE JEWELL NURSERY CO.
 POUCH N
 Lake City, Minnesota

FALL TRADE LIST READY

Lining-out and Specimen Evergreens
 Broad-Leaved Evergreens and
 General Line of Deciduous Materials.

FAIRVIEW EVERGREEN NURSERIES
 Fairview, Erie Co., Pa.

versity in broadcasting these 15-minute
 programs every Tuesday and Friday after-
 noon over station WOR are the Brook-
 lyn Botanical Garden, New York Botani-
 cal Garden, Garden Club of New Jersey,
 Federation of Garden Clubs of Bergen
 County and Federated Garden Clubs of
 New York State. Through the facilities
 of the university staff, the Radio Garden
 Club offers listeners assistance in meet-
 ing their garden problems. Requests for
 information are answered either over the
 air or by mail.

Some of the recent talks have been
 "Good Neighbors in Our Gardens," by
 H. A. Naldrett, president of the Long
 Island Nurserymen's Association; "Fall
 Care of Shade Trees," by Carl Witte,
 president of United Horticulture of New
 Jersey; "The Overcrowded Shrub Border,"
 by Dr. C. H. Connors, head of the depart-
 ment of ornamental horticulture at the
 New Jersey college of agriculture, and
 "The Needs of Your Evergreens," by Dr.
 Forman T. McLean, of the New York
 Botanical Garden.

HURRICANE IN MARYLAND.

The hurricane on the eastern sea-
 board September 18 did considerable
 damage to nurseries in some places
 along the coast.

Damage to crops and buildings caused
 a severe setback in an otherwise en-
 couraging season at Harrison's Nur-
 series, Berlin, Md. G. Hale Harrison re-
 ports:

"The terrific storm played havoc with
 our late apple crop, and we estimate
 that there were blown from the trees
 40,000 bushels of good, merchantable
 apples. This is a terrific loss, as the
 apple market is in good condition,
 prices ranging from 85 cents to \$1.40
 per bushel, according to variety and
 grade, with the general average about
 \$1.15 per bushel, f. o. b. Berlin, Md.

"A number of the large, bearing ap-
 ple and peach trees were blown down,
 and the orchard as a whole suffered
 from the high winds, resulting in con-
 siderable breakage of limbs and a
 heavy whipping of the foliage. The
 general farm crops were severely dam-
 aged. There was limited damage to the
 nursery stock. Our largest barn was
 blown down and completely destroyed,
 and several of our other buildings were
 more or less damaged by the hurri-
 cane."

UPON submitting the lowest of six bids,
 the Grand View Nurseries, Mount Ver-
 non, N. Y., were awarded a \$500 con-
 tract for seeding and planting work
 around the post office building in Gar-
 field, N. J.

THE Eidsón Landscape Co., 257 East
 Lancaster avenue, Ardmore, Pa., has sub-
 mitted the low bid, \$83,617, for a con-
 tract to provide materials and to land-
 scape six government buildings at Wash-
 ington, D. C.

FIRE caused an approximate loss of
 \$3,000 at the Leonard Nurseries, Piqua,
 O., August 25. A barn was completely
 destroyed with twelve tons of hay, peat
 moss, tools, office equipment, etc. The
 heat from the fire, believed to have
 started in the haymow, put a water me-
 ter out of commission, so that no water
 was available to fight the flames until a
 pumper was sent from the local fire de-
 partment.

RHODODENDRONS
GRAFTED NAMED HYBRIDS

Dwarf, Medium and Tall

We have fields of fine bushy well
 branched, heavily budded stock in
 25 varieties, ready for delivery
 this Fall which visiting nursery-
 men tell us is the finest they have
 ever seen.

Send for our Wholesale Fall List
 and read our offer of
 Selected Varieties for Forcing

Lack of space precludes price quotations
 on the various sizes, but we ask
 you to write us your wants, giving par-
 ticulars as to sizes and quantities and
 we will gladly quote you by return mail.

We cordially invite you to visit our 600-
 acre Nurseries at Valley Rd., Clifton, N. J.,
 and view our fields of Grafted Hybrid
 Rhododendrons; also visit our Greenhouses
 at Rutherford, N. J. They cover 300,000
 square feet.

BOBBINK & ATKINS

Rutherford, N. J.

**Improved Practices in
 Propagation by Seed**

By L. C. Chadwick

Four articles, including table of Seed
 Stratification Practices, reprinted
 from The American Nurseryman in
 32-page booklet, bound in stiff paper
 cover.

"Worth many times the price of the
 magazine" was the verdict of readers
 on these articles.

25c per copy

THE AMERICAN NURSERYMAN

508 S. Dearborn St., Chicago, Ill.

CONTRACT

with us for your

PEACH TREES

Now booking orders for fall and contracts
 for the next three years.

HOWARD-HICKORY CO.
 Hickory, N. C.

PEACH PITS

OUR PITS COMPARE FAVORABLY
 WITH THE BEST

HOGANSVILLE NURSERIES

Hogansville, Georgia

Peach Seed and Peach Trees

Write for prices. Large acreage of
 nursery stock. Will appreciate your
 want list.

SOUTHERN NURSERY CO.
 Winchester, Tenn.

OBITUARY.

John B. Wight.

John Byron Wight, Sr., proprietor of the Wight Nursery & Orchard Co., Cairo, Ga., died September 12 at the age of 77 in a hospital at Atlanta, Ga., after a week's illness.

Mr. Wight was born in Georgia, September 28, 1859. He attended both Emory College and Vanderbilt University, graduating from the latter in 1883. He established the firm which bears his name fifty years ago; at first nuts were a specialty, particularly pecans, but the line was enlarged to include fruits and later a full line of ornamentals. He was one of the founders of the National Pecan Growers' Association and served as an officer in the Georgia-Florida Pecan Growers' Association.

He had been president of the Georgia State Horticultural Society and the Georgia State Agricultural Society, the only person ever to hold both positions. He had been president of the Citizens bank at Cairo and was a director at the time of his death.

Surviving are a widow, a daughter and six sons; one son, J. B. Wight, Jr., will continue the business of his father; another, Warren C. Wight, operates the Wight Nursery Co., at Round Lake, Fla.

Harry F. Good.

Funeral services for Harry F. Good, one of the organizers of the Good & Reese Co., Springfield, O., who died September 16, were held at his home September 19. Mr. Good, aged 73 years, died at his residence after an illness of several months. Burial was in Fern-cliff cemetery.

Mr. Good was born in Cherry Camp, W. Va., and went to Springfield about fifty years ago. Until his recent illness and the reorganization of the Good & Reese firm, now known as Good & Reese, Inc., he had taken an active interest in the concern, serving as secretary and treasurer since its formation in 1888. Mr. Good was also vice-president and treasurer of Good & Welsh Peony Farms, Inc. He was a member of the Central Christian church for forty-five years, serving as a deacon there for the greater part of that time. He was a member of Anthony lodge No. 455, F. A. M., and Red Star lodge No. 205, Knights of Pythias. A son, Chester C., and a grandson, Harry F. Good, survive.

Frederick W. Wells.

Frederick W. Wells, founder and proprietor of the Pomona United Nurseries, Dansville, N. Y., died September 19 at his home after a lingering illness. He was 68 years old.

Mr. Wells was born in Lowestoft, England, coming to the United States at the age of 17. He was employed as retail manager of the Green Nurseries, Rochester, until 1907, when he went to Dansville to help establish the nursery firm of Maloney Bros. & Wells—now known as the Maloney Bros. Nursery Co.—continuing as junior partner for several years. Later he established and was proprietor of the Wells Wholesale Nursery and in recent years the Pomona nurseries.

He was a member of Phoenix lodge, F. A. M., and of the Presbyterian church. Surviving are his widow, three

daughters and two sons. Funeral services were held September 21 in the home, and burial was in the family plot in Grove Place cemetery, Chili, N. Y.

William H. Ryan.

Funeral services were held September 13 in Framingham, Mass., for William H. Ryan, proprietor of the Wayland Nurseries, Cohituate, Mass. Mr. Ryan, aged 40, died September 11 at his home in Waban, Mass., after an illness of three weeks. He was a native of Framingham. His mother, his widow, a sister and two brothers survive him.

William W. Rey.

William W. Rey, 26, son of W. E. Rey, proprietor of the W. E. Rey & Sons nursery, Oklahoma City, Okla., died August 18, at the home of his parents. He was taken ill with typhoid fever while on a vacation trip in July.

Mr. Rey was educated in the Oklahoma City schools and received a B. S. degree from the Oklahoma A. & M. College, in horticulture. During the past eighteen months, he had been employed by the United States forest service, being stationed at Tecumseh. Prior to this, he worked with his father and brother.

He was a member of the Trinity Baptist church and of Sigma Alpha Epsilon social fraternity. In addition to his parents, he is survived by two sisters and a brother. After the funeral services, held in the Trinity Baptist church, interment was made in Rose Hill cemetery.

BULLETINS RECEIVED.

"Trees to Control Soil Erosion on Iowa Farms," by Guy R. Ramsey, issued as extension circular 223 by Iowa State College, Ames, chiefly covers the planting of trees to control soil erosion, devoting three pages to a table of species, their propagation, commercial value, plantation spacing and location for most suitable control of erosion.

"Evergreen Windbreaks for Iowa Farmsteads," issued March, 1936, as extension circular 217 by Iowa State College and also written by Guy R. Ramsey, describes the benefits, methods of planting and care of evergreens, describing fourteen different species suitable for the purpose. The nurserymen of that area might use this bulletin as well as the earlier one, No. 108, entitled "The Shelterbelt as an Asset on the Iowa Farm," by I. T. Bode, to develop sales to farmers.

THE Poughkeepsie Nursery Co., Poughkeepsie, N. Y., was awarded first prize for a special educational exhibit of evergreens at the flower show at the Dutchess county fair September 2.

J. H. BURTON, formerly connected with C. G. Burton & Son, Cottage City, Md., who has been a landscape contractor at Landover, Md., for the past year, recently purchased the Anne Arundel Nursery, Annapolis, and is attempting to dispose of part of its stock.

GOVERNMENT landscaping contracts totaling \$5,362 have been let to the Grand View Nurseries, Mount Vernon, N. Y., operated by F. P. Mirabelli & Sons. The largest of the contracts is for \$3,775, to improve the driveway and several other parts of the post office at Ossining, N. Y.; all the other contracts are on post offices.

Taylor Falls, Minn.—George W. Strand, sole owner of Strand's Nursery, has filed a voluntary petition in bankruptcy. His debts total \$21,338.68, about half secured claims and half unsecured claims. Assets total \$17,890.73, of which \$11,000 is real estate and \$5,000 stock in trade.

Elizabeth, N. J.—Incorporated fifty-two years ago, the Elizabeth Nursery Co. has filed in the federal court at Newark, N. J., a petition to reorganize under the provisions of the bankruptcy act. Assets are reported to be more than \$128,000, while liabilities are reported to be approximately \$100,000.

What the Doctors ordered—

Slangily speaking, the kind of medicine nurserymen find in their trade paper—The American Nurseryman—is being accepted as what they want and need. No wonder it's being taken in larger doses—larger paid circulation month by month without other inducement than its editorial contents.

And besides, readers actually get direct help from the doctors, at no extra cost above their subscription. As, for instance—

I wish to thank you for your assistance regarding bark canker on lindens, of which I wrote to you some time ago. The replies of Dr. Chadwick and Dr. Rankin were of great help, and I believe that I now have this trouble under control. Enclosed find \$1.00 for another year's subscription to The American Nurseryman.—Arthur Braun, Cheyenne, Wyo.

Let The American Nurseryman help you, too.

The fee is small: \$1.00 per year, 24 issues.

**We are collectors of
ROCKY MOUNTAIN
EVERGREEN TREE SEEDS**

Including:

PICEA PUNGENS. Colorado Blue Spruce.
PICEA ENGELMANNII. Engelmann's Spruce.
PICEA DOUGLASII. Douglas Fir.
ABIES CONCOLOR. Colorado Silver Fir.
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JUNIPERUS SCOPULORUM. Silver Cedar.

Please tell us about your wants.

Our service will please you.

Prices to the Trade are now ready.

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Denver, Colo.

Up-to-date information
on germinating

TREE & SHRUB SEEDS

Dr. L. C. Chadwick's articles on
"Improved Practices
in Propagation by Seed,"
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Price 25c (postpaid)

HERBST BROTHERS
92 Warren St. New York, N. Y.

Write for free Tree and Shrub Seed
Catalogue containing flower and vegeta-
ble seeds attractively priced.

**Latham and Chief
RASPBERRIES**

"Mosaic-Free" Plants - Good Roots

ANDREWS NURSERY
Faribault Minn.

**Small Fruit Plants
Evergreens - Shrubs
Lining-out Stock**

Send for Complete Trade List

SCARFF'S NURSERIES
New Carlisle, O.

**CHINESE CHESTNUTS
BLIGHT RESISTANT**

Seedlings for lining out

J. Russell Smith

Box B Round Hill, Va.

NURSERY TOOLS

Nursery Spades, Kunde Knives and
Pruning Shears, Budding and Grafting
Supplies. Free 88-page Catalogue.

A. M. LEONARD & SON
Piqua - Ohio

ORNAMENTAL FRUITS.

Shrubs and trees that carry ornamen-
tal fruits in autumn and into the winter
are of increasing interest in landscape
effect. Since there are many such
plants available, wider knowledge
would help in making home grounds
more attractive and add to nursery-
men's sales. But various conditions af-
fect the fruiting of such plants, and
there are other characteristics which
should have attention when a selection
of suitable subjects is made. The latest
bulletin of popular information issued
by the Arnold Arboretum, "Woody
Plants with Ornamental Fruits," de-
votes twelve pages to this group, half
of them containing lists according to
production and color of fruits. The
author, Donald Wyman, horticulturist
at the arboretum, states that considera-
ble effort was spent in making this bul-
letin rather inclusive for nurserymen
and home owners alike, and he will be
glad to send a free copy to any nursery-
man writing him. The offer is one that
should appeal to any nurseryman in-
terested in plants of this type.

WISTERIA DATA OFFERED.

The public's interest in wisterias is
great, but would undoubtedly turn more
to the profit of the trade than it now
does if success with the plants were
more assured through wider under-
standing of the correct cultural prac-
tices. To give such data, A. E. Wohl-
ert, proprietor of The Garden Nurser-
ies, Narberth, Pa., has prepared a book-
let, entitled "Oriental Wisterias." Sev-
eral pages therein are devoted to recom-
mendations on planting, root pruning,
watering, etc., based on Mr. Wohlert's
wide experience with these subjects;
added are notes on varieties in the sev-
eral classifications, such as Japanese,
Chinese and American, and on tree
forms. Several good illustrations ap-
pear, showing wisteria plantings in full
flower.

FOUR NEW PLANT PATENTS.

It is reported by Rummler, Rummler
& Woodworth, Chicago patent lawyers,
that the following new plant patents
were granted September 15:

No. 192. Rose, issued to Joseph W. Cook, as-
signor to John Cook, Inc., Baltimore, Md. A new
rose substantially characterized by buds with
many petals, said petals tinted cream-colored.

No. 193. Carnation, issued to Shirley Hem-
mings, Abington, Mass., assignor to Littlefield-
Wyman Nurseries, Abington. A carnation char-
acterized by a bloom having a predominantly rhe-
damine purple color.

No. 194. Rose, issued to Verne Stone Hillock,
Arlington, Tex. A variety of hybrid Perpetiana
rose plant characterized particularly by its hard-
wooded development and disease-resistant foliage
and its flowers of distinctive orange pink color.

No. 195. Grapevine, issued to Tice C. Kevitt,
Pompton Lakes, N. J., assignor to Meyer Aropo-
witz, doing business as Barclay Nursery, New
York. A grapevine characterized especially by
its differences from the Niagara grape, of which
it is a new descendant, such differences includ-
ing a sweeter taste and amber color of the fruit
when ripe.

ROSE INTRODUCER.

Correcting the registration announce-
ment of the American Rose Society in
the September 15 issue, Frank C.
Raffel, originator of Maid of Gold,
states the introducer is not himself,
but the Port Stockton Nursery, R. 1,
Box 161, Stockton, Cal.

FIRE destroyed the residence of H. L.
Warnke, the office and greenhouse at the
establishment of Warnke & Son Nurseries,
Holland, O., recently.

**BARTEDES
TREE SEEDS**

¶ Evergreens and
Deciduous from
all sections of
U. S., Asia and
Europe.

¶ New Price List
is now ready.

¶ Colorado-grown
Chinese Elm
Seedlings.

The Barteldes Seed Co.
Denver Colo.

PEONIES

Strong 3 to 5-eye divisions from young
plants. No nematodes or Lemoine's dis-
ease. Clean, healthy stock. Minimum
order \$2.00.

Rachel, cherry-red	1.00	1.00
Karl Rosenfeld, dark red	1.20	10.00
Ben. Franklin, bright red	1.00	8.00
Edulis Superba, early pink	.80	6.00
Festiva Maxima, large white	1.20	10.00
Duchesse de Nemours, cream	.80	6.00
Mixed, all colors	.80	5.00
Mixed, one color	.80	6.00
L'Etincelante, rose; single	3.00	25.00

Hundreds of other varieties priced on
request.

L. D. BAKER
Kendallville Ind.

Perennials and Rock Plants

Many new and rare kinds

Send for new catalogue

D. & C. Hardy Plant Nursery
Westminster, Md.

PROFITABLE PEONIES

Best Varieties. Attractive Prices.
Fine Quality Roots, liberally graded.
25th Annual Catalogue ready.

HARMEL PEONY COMPANY
Growers of Fine Peonies since 1911
Berlin, Maryland

**HERBACEOUS AND
TREE PEONIES**

Newest Hybrid Lilacs and other
Specialties. Ask for price list.

The Cottage Gardens
Laosung, Mich.

HEALTHY ROOT DEVELOPMENT

YOU can get better results with Evergreens, Shrubs, and Perennials of all sorts, if they are planted in a properly conditioned soil.

Dig in G.P.M. Peat Moss before you do any planting. It readily makes humus, keeps the soil well aerated at all times, and stores up moisture and plant food. It promotes vigorous root growth and luxuriant top growth. G.P.M. Peat Moss comes in pressure packed bales to assure you more peat substance for your money. The "green" bale head distinguishes it from inferior grades. Write today for quantity prices and free literature. Address Dept. AM-21.

PEAT ^{GPM} MOSS

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CATALOGUES RECEIVED.

[In writing for a copy of any of the catalogues reviewed below, please mention that you saw it described in The American Nurseryman.]

D. Hill Nursery Co., Dundee, Ill.—Mimeographed sheet as a price list for stock at the retail sales yard, fall, 1936, offers a number of varieties of evergreens, freshly dug and balled and burlapped. The wholesale discount is mentioned.

The Tingle Nursery Co., Pittsville, Md.—Azaleas are generously enumerated in the Tingle price list, including a number of new hardy varieties released by the U. S. D. A. Other sections are devoted to ornamental stock, boxwood, ilex, rhododendrons, taxus, root grafts and strawberry plants. A map of the region about Pittsville is on the back cover.

Gladwood Gardens, Copemish, Mich.—A folder listing plants and seeds of varieties never before offered in this country and other fine stock not well known. Seeds have been added to the firm's stock for the first time. Included in the material are both perennial and annual stock.

Orenco Nursery Co., Orenco, Ore.—Fall, 1936, and spring, 1937, wholesale price list. Containing about a dozen photographs of the firm's plantings, the catalogue presents, first, fruit trees, then nuts and small fruits. There are lists of fruit and shade tree seedlings, larger ornamental stock, deciduous shrubs, coniferous evergreens, broad-leaved evergreens, hedge plants, vines, also a generous listing of roses, a number of peonies and some hardy perennials. The inside cover gives the freight rates to various cities, and at the back is space for memoranda.

Fairview Evergreen Nurseries, Fairview, Pa.—Dated September 8, this wholesale list includes within its twenty-eight pages a number of fine pictures of the firm's stock and plantings. The clearly printed lists embrace evergreen seedlings, transplants for lining out and B. & B. stock; broad-leaved evergreens balled and burlapped, ornamental and shade trees, deciduous shrubs, vines and perennials.

The Conard-Pyle Co., West Grove, Pa.—"Star Roses" pictures Angela Mateu rose on the front cover, orange rose in color and a prize-winner at various recent exhibitions. The back shows the varieties Mme. Cochet-Cochet and Rouge Maitrelin. First is offered the patented yellow Rose Feu Pernet-Ducher, illustrated, and then are listed a number of everblooming novelties, other everblooming roses, "Star" collections, climbing roses, polyantha, hybrid perpetual and other types. Some hardy perennial plants are listed. The many illustrations are in color.

Herbst Bros., New York, N. Y.—Besides a comprehensive assortment of tree and shrub seeds, the wholesale list issued by Herbst Bros., as agents for T. Sakata & Co., Japan, presents a selection of flower, vegetable and grass seeds, also a few varieties of tulips. Among the tree and shrub seeds are those of coniferous and broad-leaved evergreens and deciduous stock. A note adds that a number of exotic varieties are offered in another list. Fertilizers and horticultural books are also handled by Herbst's, as indicated in the present catalogue.

The Conard-Pyle Co., West Grove, Pa.—"Trade List of Star Roses, Shrubs, Evergreens, etc., 1936-'37." Booklet listing roses, particularly patented varieties and the new dwarf, Tom Thumb; shrubs, vines, hedge plants, evergreens, cannas and hardy phloxes.

Princeton Nurseries, Princeton, N. J.—Wholesale price list for fall, 1936, of William Flemer's Sons, Inc., operator of the Princeton Nurseries. Alphabetized enumeration of nursery material from abelia through yucca. Among the stock are a number of azalea varieties. The several illustrations are chiefly of the firm's plantings.

Dahliadel Nurseries, Vineland, N. J.—Giving advance prices for 1937 is the latest folder issued by Dahliadel, printed in green on gray paper. Six introductions are presented for 1937. The other lists are assorted as to type of bloom.

Japan Horticulture Co., Oiso Kanagawa-Ken, Japan.—Abounding in illustrations is the 1937 catalogue of the Japan Horticulture Co., printed in English and Japanese, only the names and prices being in English. Among the specialties are orchids in many genera, amaryllides, berries, other fruits, seeds of begonias and cyclamens, roses and peonies.

The Cottage Gardens, Lansing, Mich.—Ideal Darwin tulips are the initial offerings in this small, clearly printed catalogue. Other tulips of many types continue the lists, with other spring-blooming bulbs. Dwarf lilies and lilies of the valley are included. Also represented are various lilies, oriental poppies, day lilies, lilacs and peonies.

Louis E. Bedard, Toronto, Ont.—Two folders, one, "Exclusive Introductions," presents the French dahlia originations of Mons. A. Pesant, with Polichinelle shown on the cover. The other offers dahlia roots for fall, 1936, of cactus and semi-cactus sorts, also decorative.

W. T. Smith & Co., Geneva, N. Y.—Wholesale price list, dated September 10, of nursery stock. Fruit trees, ornamental trees and shrubs, hedge plants, evergreens, roses of various types, clematis, lilies, peonies, phloxes and other perennials are enumerated. The back cover shows a picture of a block of Norway maple at the Smith nurseries.

D. H. Snowberger, Parette, Ida.—Native stock is included in the retail lists of perennial and rocky plants, bulbs, shrubs and seeds, among the last-named being seeds of various lilies. The bulbs include material for fall, and for spring, planting.

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